

APPENDIX H

RI LABORATORY DATA

PART 13

ARI, IGL, AND PTS



21 November 2017

Bill Halderman
PES Environmental, Inc.
1215 4th Ave, Suite 1350
Seattle, WA 98161

RE: American Linen

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)
17J0020

Associated SDG ID(s)
N/A

Amanda Volgardsen

Digitally signed by Amanda
Volgardsen
DN: c=US, st=Washington,
l=Tukwila, o=Analytical Resources,
Inc., ou=Client Services,
cn=Amanda Volgardsen,
email=amandav@arilabs.com
Date: 2017.11.21 12:04:34 -08'00'

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclosed Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.





Cooler Receipt Form

ARI Client: PES Environmental

Project Name: American Linen

COC No(s): _____ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: 17J0020

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time: 16 27 25

Temp Gun ID#: D002565

If cooler temperature is out of compliance fill out form 00070F

Cooler Accepted by: SF Date: 10/2/17 Time: 1627

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: None

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI..... NA

Was Sample Split by ARI : NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: SF Date: 10/3/17 Time: 900

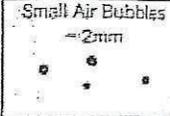
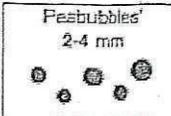
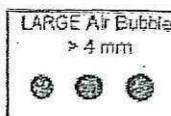
**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

No labels on bottle

By: _____ Date: _____

			Small → "sm" (< 2 mm)
			Peabubbles → "pb" (2 to < 4 mm)
			Large → "lg" (4 to < 6 mm)
			Headspace → "hs" (> 6 mm)

Materials Testing & Consulting, Inc.

Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting



Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter, ASTM D5084

Project: American Linen
 Project #: 17T001-063
 Client: Analytical Resources, Inc.

Date Received: October 3, 2017
 Sampled By: Others
 Date Tested: November 16, 2017
 Tested By: B. Goble

Test Results for Flexible Wall Hydraulic Conductivity Testing											
Sample Identification	Depth (ft)	As Received Sample Parameters				After Test Sample Parameters				Gradient (h/l)	Hydraulic Conductivity (cm/s)
		Wet Density (lbs/ft ³)	Total Porosity	Saturation	Moisture Content (%)	Wet Density (lbs/ft ³)	Total Porosity	Saturation	Moisture Content (%)		
A-MW63-100B	?	124.7	0.33	0.66	10.2	133.0	0.30	0.91	14.5	25.95	1.54E-06

Notes:

1. The samples were tested in accordance with ASTM D-5084.
2. The tests were performed using tap water for the permeant.
3. The porosity and the saturation were calculated using assumed specific gravity values.

Sample Description and Dimensions							
Sample ID	Depth (ft)	Visual Description	Confining Pressure (psi)	Initial Average Length (cm)	Initial Average Diameter (cm)	Final Average Length (cm)	Final Average Diameter (cm)
A-MW63-100B	?	Brown Clayey Silt	3.0	6.61	7.19	6.13	7.31

Comments: _____

Reviewed By: 

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 NW Region ~ 805 Dupont Street, Suite 5 • Bellingham, WA 98225 • Phone (360) 647-6061 • Fax (360) 647-8111
 SW Region ~ 2118 Black Lake Blvd. SW • Olympia, WA 98512 • Phone (360) 534-9777 • Fax (360) 534-9779
 Kitsap Region ~ 5451 NW Newberry Hill Road, Suite 101 • Silverdale, WA 98383 • Phone (360) 698-6787 • Fax (360) 692-1919
 Visit our website: www.mtc-inc.net

Materials Testing & Consulting, Inc.

Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting



Project: American Linen (17T001-063)	Date Received: October 3, 2017
Project #: 17T001-063	Sampled By: Others
Client : Analytical Resources, Inc.	Date Tested: October 16, 2017
Source: B-206-50-51	Tested By: B. Goble
MTC Sample#: T17-1493	

CASE NARRATIVE

1. One sample was submitted for hydrometer analysis on May 7, 2015.
2. The samples were submitted for grain size distribution according to ASTM D422. The samples were prepared according to ASTM D421.
3. An assumed specific gravity of 2.65 was used in the hydrometer calculations.
4. A standard milkshake mixer type device was used to disperse the fine fraction sample for one minute.
5. The data is provided in summary tables and plots.
6. There were no noted anomalies in this project.

All results apply only to actual locations and materials tested. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

Reviewed by: _____

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Materials Testing & Consulting, Inc.

Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting



Project: American Linen (17T001-063)

Project #: 17T001-063

Date Received: October 3, 2017

Date Tested: October 16, 2017

Client: Analytical Resources, Inc.

Sampled by: Others

Tested by: B. Goble

Percent Finer (Passing) Than the Indicated Size

Sieve Size (microns)	3"	2"	1 1/2"	1"	3/4"	1/2"	3/8"	#4 (4750)	#10 (2000)	#20 (850)	#40 (425)	#60 (250)	#100 (150)	#200 (75)	32	22	13	9	7	3.2	1.3
B-206-50-51	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.0	91.3	84.1	67.9	44.2	28.9	20.0	13.5	11.2	8.1	6.5	5.4	3.8	2.3

Testing performed according to ASTM D421/D422
Organics were not removed prior to analysis. The grain size distribution reported is the "apparent grain size distribution".

B. Goble

Reviewed by: _____

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Project: American Linen (17T001-063)

Project #: 17T001-063

Date Received: October 3, 2017

Date Tested: October 16, 2017

Client: Analytical Resources, Inc.

Sampled by: Others

Tested by: B. Goble

Percent Retained in Each Size Fraction

Description	% Coarse Gravel			% Gravel			% Coarse Sand	% Medium Sand			% Fine Sand			% Very Coarse Silt	% Coarse Silt	% Medium Silt	% Fine Silt	% Very Fine Silt	% Clay			
	3-2"	2-1 1/2"	1 1/2"-1"	1-3/4"	3/4-1/2"	1/2-3/8"		3/8"-4/750	4750-2000	2000-850	850-425	425-250	250-150							150-75	75-32	32-22
B-206-50-51	0.0	0.0	0.0	0.0	0.0	0.0	3.0	5.6	7.2	16.3	23.6	15.4	8.9	6.5	2.3	3.1	1.5	1.2	1.5	1.5	1.5	2.3

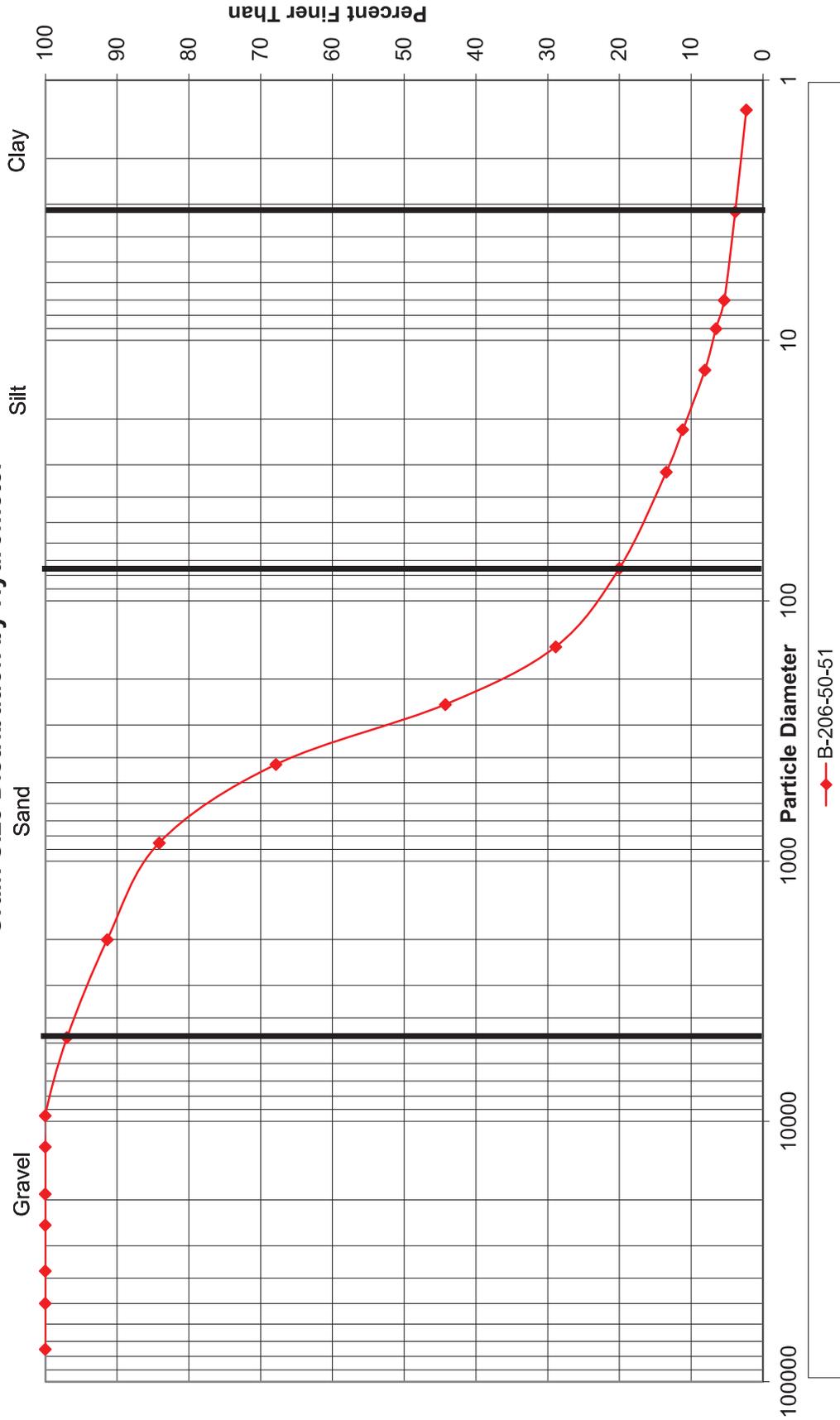
Testing performed according to ASTM D421/D422
Organics were not removed prior to analysis. The grain size distribution reported is the "apparent grain size distribution".

Reviewed by: B. Goble

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Grain Size Distribution by Hydrometer



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Project: American Linen (17J0020) **Client:** Analytical Resources, Inc.
Project #: 17T001-063
Date Received: October 3, 2017
Date Tested: October 16, 2017
Sampled by: Others
Tested by: B. Goble

Density - ASTM D2937

Sample #	Wet Density, pcf	Moisture Content, %	Dry Density, pcf
B-206-50-51	126.5	10.2	114.8

All results apply only to actual locations and materials tested. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

Reviewed by: *B. Goble*

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PES Environmental, Inc.
1215 4th Ave, Suite 1350
Seattle WA, 98161

Project: American Linen
Project Number: 1413.001.02.602
Project Manager: Bill Halderman

Reported:
21-Nov-2017 12:03

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-206-50-51	17J0020-01	Solid	14-Aug-2017 11:20	02-Oct-2017 16:27



PES Environmental, Inc.
1215 4th Ave, Suite 1350
Seattle WA, 98161

Project: American Linen
Project Number: 1413.001.02.602
Project Manager: Bill Halderman

Reported:
21-Nov-2017 12:03

Certified Analyses included in this Report

Analyte

Certifications

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	UST-033	05/11/2018
CALAP	California Department of Public Health CAELAP	2748	02/28/2018
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	02/07/2019
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006	05/11/2018
WADOE	WA Dept of Ecology	C558	06/30/2018
WA-DW	Ecology - Drinking Water	C558	06/30/2018



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Project: American Linen
Project Number: 1413.001.02.602
Project Manager: Bill Halderman

Reported:
21-Nov-2017 12:03

Notes and Definitions

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- [2C] Indicates this result was quantified on the second column on a dual column analysis.



INTEGRATED GEOSCIENCES LABORATORIES, LLC

*Environmental * Geotechnical * Core Analysis*

6016 Centralcrest Street • Houston, Texas 77092
Telephone (713) 316-1800 • Fax (877) 255-9953

May 28, 2020

Bill Haldeman,
Project Manager,
PES Environmental, Inc.
1215 4th Ave Suite 1350,
Seattle, WA 98161.

Re: IGL File No: **2005-10**
Project Name: **American Linen.**
Project Number: **1413.001.02.501B.**
Site Location: **Seattle, WA.**

Subject: Final Report: Dry Bulk Density-(ASTM D2937), Specific Gravity – (ASTM D845), Hydraulic Conductivity-(API RP40/ASTM D5084), Fractional Organic Carbon by Walkley-Black method and Grain Size Analysis-(ASTM D422).

Dear Bill Haldeman,

Please find enclosed report for Physical Properties analyses conducted upon soil samples received from your “**American Linen**” project. All analyses were performed by applicable ASTM, EPA, or API methodologies. The samples are currently in storage and will be retained for thirty days past the completion of testing at no charge. Please note that the samples will be disposed of at that time. You may contact me regarding storage, disposal, or return of the samples.

Integrated Geosciences Laboratories appreciate the opportunity to be of service. If you have any questions or require additional information, please contact me or Emeka Anazodo at (713) 316-1800.

Sincerely,
Integrated Geosciences Laboratories, LLC.

Wumi Andrew

Laboratory Technician.
Encl.

Integrated Geosciences Laboratories, LLC.

Project Name: American Linen

IGL File No: 2005-10

Project Number: 1413.001.02.501B

Client: PES Environmental, Inc.

Site location: Seattle, WA

Date Received: 5/9/2020

TEST PROGRAM - 20200519

Serial Number	Sample ID	Date; Time Sampled	Depth (feet)	Matrix Type	Hydraulic	Bulk Density	Specific	Grain Size	Total Organic	Comments
					Conductivity API RP40 OR ASTM D5084	ASTM D2937	Gravity ASTM D854	Analysis ASTM D422	Carbon Walkley-Black	
		Date Received: 20200519								
1	MW-343-78	04/13/20; 15:35	77-78	Soil				X		1 ziplock bag
2	MW-343-104	04/14/20; 11:07	103-104	Soil				X	X	1 ziplock bag
3	MW-331-44	04/17/20; 13:41	44-45	Soil				X	X	1 ziplock bag
4	MW-335-19	04/21/20; 10:00	19-20	Soil				X		1 ziplock bag
5	MW-335-39	04/21/20; 10:55	39-40	Soil				X		1 ziplock bag
6	MW-335-68	04/21/20; 12:10	68-69	Soil				X		1 ziplock bag
7	MW-336-24	04/22/20; 10:00	23.5-24.5	Soil				X		1 ziplock bag
8	MW-336-94	04/22/20; 14:00	94-95	Soil				X		1 ziplock bag
9	MW-334-26	04/16/20; 09:47	26-27	Soil				X		1 ziplock bag
10	MW-338-47	05/01/20; 12:00	47-48	Soil				X		1 ziplock bag
11	MW-338-54	05/01/20; 12:30	54-55	Soil				X	X	1 ziplock bag
12	MW-341-90	05/04/20; 14:50	90-91	Soil				X	X	1 ziplock bag
13	MW-341-102	05/04/20; 15:05	102-103	Soil				X	X	1 ziplock bag
14	MW-337-15	05/01/20; --:--	15-15.5	Soil		X	X	X		2.5" X 6.5" stainless steel tube
15	MW-337-15.5	05/01/20; --:--	15.5-16	Soil	X					2.5" X 6.5" stainless steel tube
16	MW-340-47	05/05/20; --:--	47-47.5	Soil	X			X		2.5" X 6.5" stainless steel tube
	TOTAL				2	1	1	15	5	

Laboratory Test Program Notes

- Standard TAT for basic analysis is 10-15 business days.
- Specific gravity needed to calculate bulk density data.

IGL File No: 2005-10
 Client: PES Environmental, Inc.
 Report Date: 05/27/20

SPECIFIC GRAVITY OF SOILS BY PYCNOMETER
 (Methodology: ASTM D 854-98)

Project Name: American Linen
 Project No: 1413.001.02.501B
 Site Location: Seattle, WA

SAMPLE ID.	IGL ID	DEPTH, ft.	ANALYSIS DATE/TIME	TEMPERATURE, °C	TEMPERATURE CORRECTION FACTOR	MASS OF PYCNOMETER AND WATER, grams	MASS OF OVEN DRY SOIL, grams	MASS OF PYCNOMETER, OVEN DRY SOIL, AND WATER, grams	SPECIFIC GRAVITY AT TEMPERATURE	SPECIFIC GRAVITY AT 20°C	Calculated
											GRAIN DENSITY AT TEMPERATURE, grams/cc
MW-337-15	14	15-15.25	20191105/1532	24	0.9969	348.93	133.57	432.69	2.68	2.67	2.68

IGL File No: 2005-10
 Client: PES Environmental, Inc.
 Report Date: 5/27/2020

DRY BULK DENSITY OF IN-PLACE SOIL and TOTAL POROSITY (CALCULATED)
 (Methodology: ASTM D2937, calculation)

Project Name: American Linen
 Project No: 1413.001.02.501B
 Site Location: Seattle, WA

SAMPLE ID.	IGL ID	DEPTH, ft.	ANALYSIS DATE	TOTAL SAMPLE VOLUME, cc	MOISTURE CONTENT, % wt	VOLUMETRIC WATER CONTENT, fraction Vb	DRY BULK DENSITY, g/cc	TOTAL (1) POROSITY, fraction Vb	VOLUME OF SOLIDS, cc	VOLUME OF VOIDS, cc	VOID RATIO	SATURATION
MW-337-15	14	15.0-15.25	20200520	226.72	27.6	0.425	1.54	0.426	130.2	96.5	0.741	0.998

(1) Total Porosity by calculated method
 Specific gravity used for calculation of total porosity was measured = 2.68
 Water = 0.9981 g/cc; Vb = Bulk Volume

IGL File No: 2005-10
 Client: PES Environmental, Inc.
 Report Date: 05/27/20

Integrated Geosciences Laboratories, LLC

PHYSICAL PROPERTIES DATA - HYDRAULIC CONDUCTIVITY

(Methodology: API RP 40; EPA 9100)

Project Name: American Linen
 Project No: 1413.001.02.501B
 Site Location: Seattle, WA

SAMPLE ID.	IGL ID	DEPTH, ft.	SAMPLE ORIENTATION (1)	ANALYSIS DATE	25 PSI CONFINING STRESS		
					EFFECTIVE PERMEABILITY TO WATER (2,3), millidarcy	HYDRAULIC CONDUCTIVITY (3), cm/s	INTRINSIC PERMEABILITY TO WATER (3), cm ²
MW-337-15.5	15	15.15	V	20200520	2.97	2.89E-06	2.93E-11
MW-340-47	16	47.15	V	20200520	1.32	1.28E-06	1.30E-11

(1) Sample Orientation: H = horizontal; V = vertical; R = remold
 (2) Effective (Native) = With as-received pore fluids in place.
 (3) Permeability to water and hydraulic conductivity measured at saturated conditions.
 Water = filtered Laboratory Fresh (tap) or Site water.

IGL File No: 2005-10
 Client: PES Environmental, Inc.
 Report Date: 5/27/2020

ORGANIC CARBON DATA - TOC (foc)
 (Methodology: Walkley-Black)

Project Name: American Linen
 Project No: 1413.001.02.501B
 Site Location: Seattle, WA

SAMPLE ID.	IGL ID	DEPTH, ft.	ANALYSIS DATE	ANALYSIS TIME	SAMPLE MATRIX	TOTAL ORGANIC CARBON, mg/kg	FRACTION ORGANIC CARBON, g/g
MW-343-104	2	103-104	20200520	1000	SOIL	290	2.90E-04
MW-331-44	3	44-45	20200520	1000	SOIL	670	6.70E-04
MW-338-54	11	54-55	20200520	1000	SOIL	570	5.70E-04
MW-341-90	12	90-91	20200520	1000	SOIL	100	1.00E-04
MW-341-102	13	102-103	20200520	1000	SOIL	390	3.90E-04

Blank	N/A	20200520	1000	BLANK	ND	ND
SRM D102-542	N/A	20200520	1000	SRM	3750	3.75E-03

Reporting Limit: 100 1.00E-04

QC DATA

SRM ID/Lot No.	REC (%)	Control Limits	Certified Concentration mg/kg	QC Performance Acceptance Limits, mg/kg	
				Lower	Upper
SRM D102-542	119	75-125	3140	1270	5750

ND = Not Detected

PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422)

PROJECT NAME: American Linen
 PROJECT NO: 1413.001.02.501B
 SITE LOCATION: Seattle, WA

Sample ID	IGL ID	Depth, ft.	Mean Grain Size Description USCS/ASTM (1)	Median Grain Size, mm	Particle Size Distribution, wt. percent						
					Gravel	Sand Size					Silt/Clay
						Coarse	Medium	Fine	Silt	Clay	
MW-343-78	1	77-78	Gravel	7.960	65.00	12.05	9.61	10.11	1.76	1.47	3.23
MW-343-104	2	103-104	Medium sand	0.992	28.92	10.22	32.09	24.35	3.03	1.39	4.42
MW-331-44	3	44-45	Fine sand	0.081	0.00	0.04	0.78	58.64	35.96	4.58	40.54
MW-335-19	4	19-20	Fine sand	0.332	16.84	2.14	21.70	38.54	13.36	7.42	20.78
MW-335-39	5	39-40	Silt	0.062	0.00	0.20	5.26	22.53	61.41	10.61	72.01
MW-335-68	6	68-69	Fine sand	0.355	0.00	0.00	22.71	65.54	6.91	4.83	11.74
MW-336-24	7	23.5-24.5	Fine sand	0.225	0.00	2.73	29.30	39.66	11.40	16.91	28.31
MW-336-94	8	94-95	Fine sand	0.407	0.00	0.16	45.20	49.20	2.44	3.00	5.44
MW-334-26	9	26-27	Fine sand	0.275	0.76	4.68	28.90	47.28	15.76	2.62	18.38
MW-338-47	10	47-48	Silt	0.043	0.00	0.00	1.22	13.23	46.92	38.63	85.55
MW-338-54	11	54-55	Fine sand	0.082	0.00	0.08	2.12	53.86	37.13	6.81	43.94
MW-341-90	12	90-91	Medium sand	0.587	10.56	13.74	41.17	33.88	0.44	0.22	0.65
MW-341-102	13	102-103	Fine sand	0.206	0.55	0.22	4.10	83.31	10.84	0.99	11.82

(1) Based on Mean from Trask

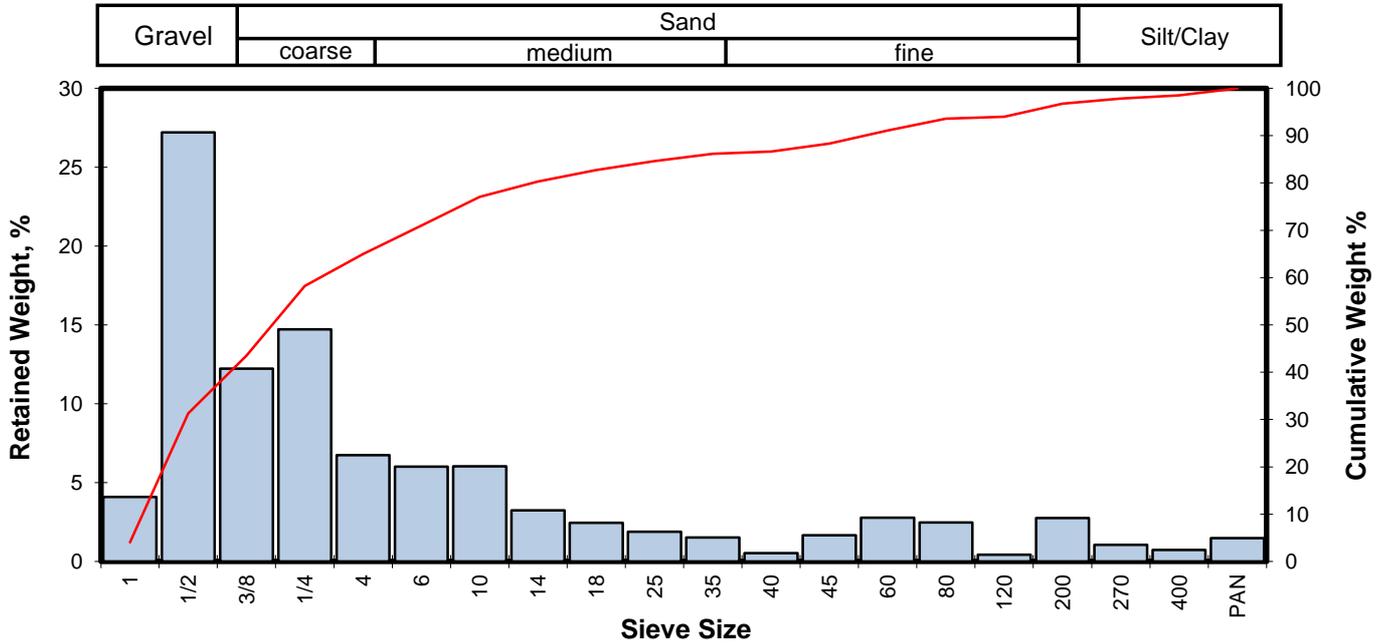
PARTICLE SIZE SUMMARY
 (METHODOLOGY: ASTM D422)

PROJECT NAME: American Linen
 PROJECT NO: 1413.001.02.501B
 SITE LOCATION: Seattle, WA

Sample ID	IGL ID	Depth, ft.	Mean Grain Size Description USCS/ASTM (1)	Median Grain Size, mm	Particle Size Distribution, wt. percent						
					Gravel	Sand Size					Silt/Clay
						Coarse	Medium	Fine	Silt	Clay	
MW-337-15	14	15.25-15.5	Silt	0.072	10.17	5.63	12.82	20.72	26.11	24.55	50.66
MW-340-47	16	47.0-47.3	Silt	0.049	0.00	0.04	0.69	30.23	37.06	31.99	69.05

(1) Based on Mean from Trask

Client: PES Environmental Inc. **IGL ID:-** 1 **IGL File No:** 2005-10
Project: American Linen **Sample ID:** MW-343-78
Project No: 1413.001.02.501B **Depth, ft:** 77-78



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	39.36	4.09	4.09
0.4922	12.501	-3.64	1/2	261.84	27.21	31.30
0.3740	9.500	-3.25	3/8	117.72	12.23	43.53
0.2500	6.351	-2.67	1/4	141.66	14.72	58.25
0.1873	4.757	-2.25	4	64.89	6.74	65.00
0.1324	3.364	-1.75	6	57.87	6.01	71.01
0.0787	2.000	-1.00	10	58.09	6.04	77.05
0.0557	1.414	-0.50	14	31.11	3.23	80.28
0.0394	1.000	0.00	18	23.62	2.45	82.74
0.0278	0.707	0.50	25	18.18	1.89	84.63
0.0197	0.500	1.00	35	14.54	1.51	86.14
0.0166	0.420	1.25	40	5.00	0.52	86.66
0.0139	0.354	1.50	45	16.03	1.67	88.32
0.0098	0.250	2.00	60	26.77	2.78	91.10
0.0070	0.177	2.50	80	23.81	2.47	93.58
0.0049	0.125	3.00	120	4.13	0.43	94.01
0.0029	0.074	3.75	200	26.56	2.76	96.77
0.0021	0.053	4.25	270	10.05	1.04	97.81
0.0015	0.037	4.75	400	6.93	0.72	98.53
			PAN	14.13	1.47	100.00
TOTALS				962.29	100.00	100.00

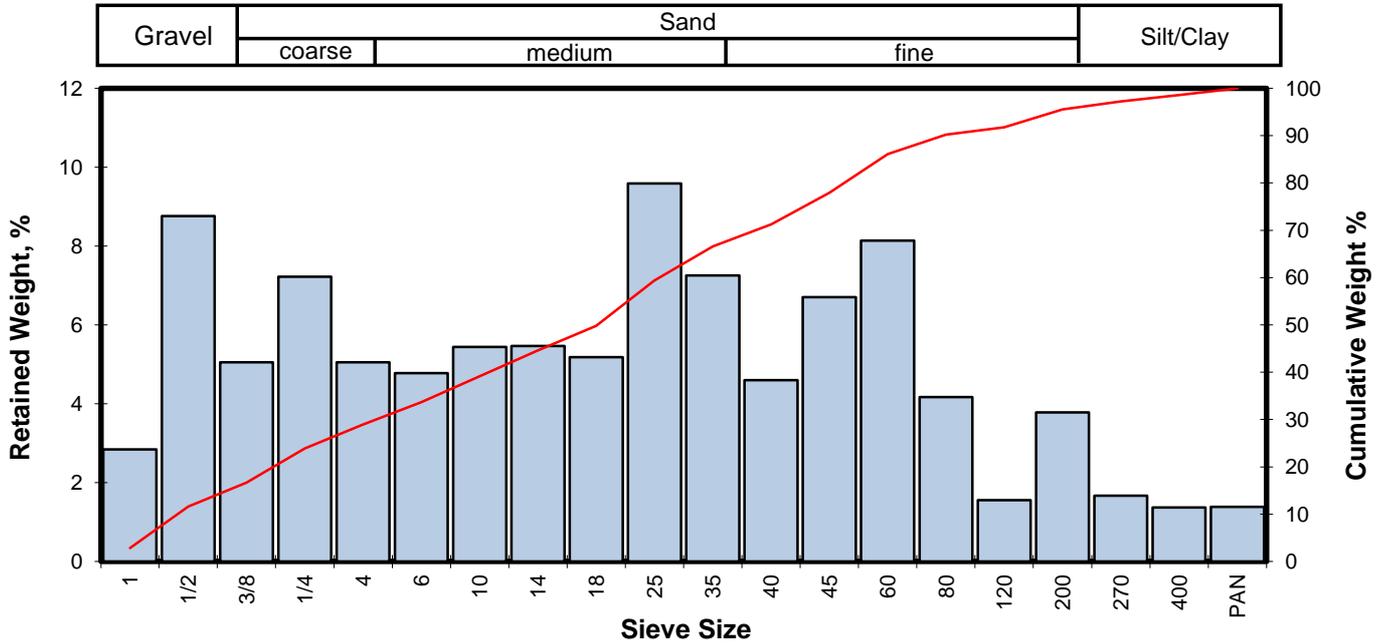
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-4.61	0.9618	24.430
10	-4.43	0.8468	21.508
16	-4.21	0.7268	18.460
25	-3.88	0.5779	14.678
40	-3.36	0.4049	10.284
50	-2.99	0.3134	7.960
60	-2.56	0.2320	5.893
75	-1.25	0.0939	2.386
84	0.33	0.0312	0.793
90	1.80	0.0113	0.287
95	3.27	0.0041	0.104

Measure	Trask	Inman	Folk-Ward
Median, phi	-2.99	-2.99	-2.99
Median, in.	0.3134	0.3134	0.3134
Median, mm	7.960	7.960	7.960
Mean, phi	-3.09	-1.94	-2.29
Mean, in.	0.3359	0.1506	0.1923
Mean, mm	8.532	3.826	4.884
Sorting	2.480	2.270	2.329
Skewness	0.743	0.466	0.527
Kurtosis	0.290	0.735	1.232

Grain Size Description (ASTM-USCS Scale) Gravel (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	65.00
Coarse Sand	10	12.05
Medium Sand	40	9.61
Fine Sand	200	10.11
Silt	<200	1.76
Clay	Pan	1.47
Total		100

Client: PES Environmental Inc. **IGL ID:-** 2 **IGL File No:** 2005-10
Project: American Linen **Sample ID:** MW-343-104
Project No: 1413.001.02.501B **Depth, ft:** 103-104



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	22.72	2.84	2.84
0.4922	12.501	-3.64	1/2	70.12	8.76	11.60
0.3740	9.500	-3.25	3/8	40.43	5.05	16.65
0.2500	6.351	-2.67	1/4	57.80	7.22	23.87
0.1873	4.757	-2.25	4	40.41	5.05	28.92
0.1324	3.364	-1.75	6	38.23	4.78	33.70
0.0787	2.000	-1.00	10	43.53	5.44	39.14
0.0557	1.414	-0.50	14	43.74	5.47	44.60
0.0394	1.000	0.00	18	41.47	5.18	49.78
0.0278	0.707	0.50	25	76.75	5.99	59.37
0.0197	0.500	1.00	35	58.04	7.25	66.63
0.0166	0.420	1.25	40	36.81	4.60	71.23
0.0139	0.354	1.50	45	53.66	6.70	77.93
0.0098	0.250	2.00	60	65.13	8.14	86.07
0.0070	0.177	2.50	80	33.35	4.17	90.23
0.0049	0.125	3.00	120	12.47	1.56	91.79
0.0029	0.074	3.75	200	30.29	3.78	95.58
0.0021	0.053	4.25	270	13.37	1.67	97.25
0.0015	0.037	4.75	400	10.92	1.36	98.61
			PAN	11.11	1.39	100.00
TOTALS				800.35	100.00	100.00

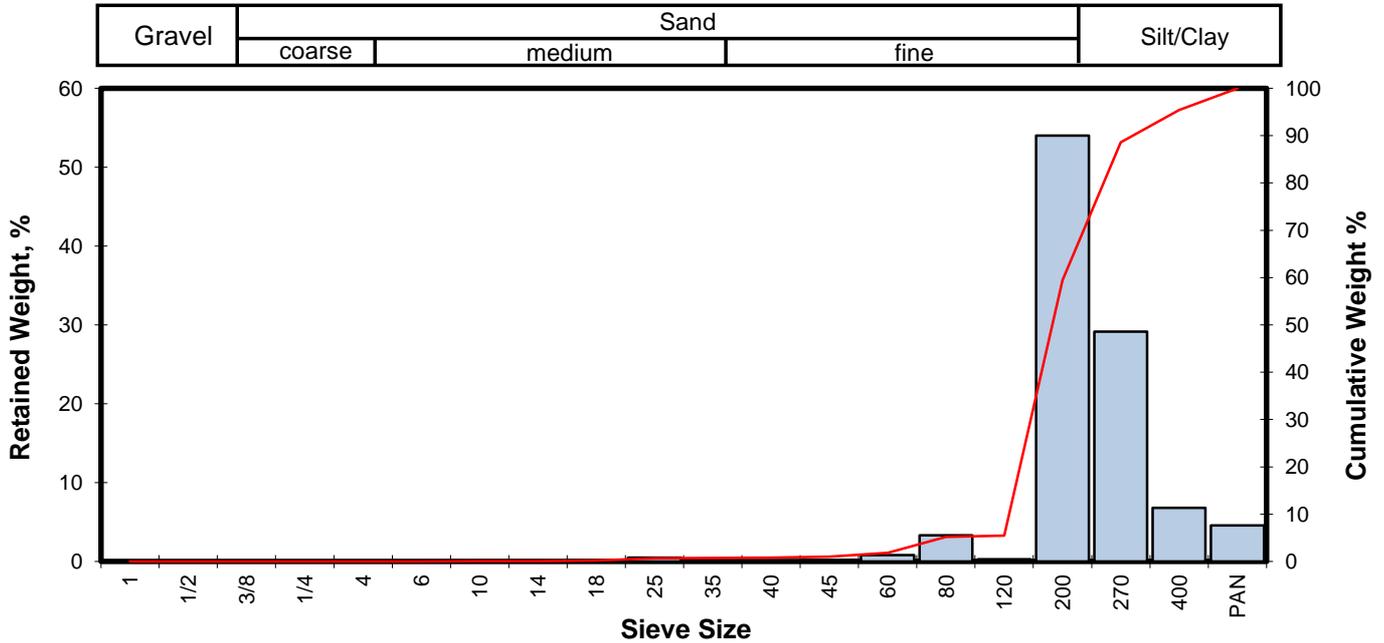
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-4.40	0.8296	21.073
10	-3.83	0.5586	14.188
16	-3.30	0.3875	9.843
25	-2.57	0.2344	5.954
40	-0.92	0.0746	1.894
50	0.01	0.0391	0.992
60	0.54	0.0270	0.686
75	1.39	0.0150	0.381
84	1.87	0.0107	0.273
90	2.47	0.0071	0.180
95	3.64	0.0032	0.080

Measure	Trask	Inman	Folk-Ward
Median, phi	0.01	0.01	0.01
Median, in.	0.0391	0.0391	0.0391
Median, mm	0.992	0.992	0.992
Mean, phi	-1.66	-0.71	-0.47
Mean, in.	0.1247	0.0645	0.0546
Mean, mm	3.168	1.639	1.387
Sorting	3.951	2.586	2.510
Skewness	1.519	-0.280	-0.189
Kurtosis	0.199	0.553	0.830

Grain Size Description (ASTM-USCS Scale) Medium sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	28.92
Coarse Sand	10	10.22
Medium Sand	40	32.09
Fine Sand	200	24.35
Silt	<200	3.03
Clay	Pan	1.39
Total		100

Client: PES Environmental Inc. **IGL ID:-** 3 **IGL File No:** 2005-10
Project: American Linen **Sample ID:** MW-331-44
Project No: 1413.001.02.501B **Depth, ft:** 44-45



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.20	0.04	0.04
0.0557	1.414	-0.50	14	0.20	0.04	0.08
0.0394	1.000	0.00	18	0.68	0.14	0.22
0.0278	0.707	0.50	25	2.41	0.48	0.70
0.0197	0.500	1.00	35	0.25	0.05	0.75
0.0166	0.420	1.25	40	0.34	0.07	0.82
0.0139	0.354	1.50	45	1.03	0.21	1.02
0.0098	0.250	2.00	60	4.12	0.83	1.85
0.0070	0.177	2.50	80	16.59	3.32	5.17
0.0049	0.125	3.00	120	1.37	0.27	5.45
0.0029	0.074	3.75	200	269.48	54.01	59.46
0.0021	0.053	4.25	270	145.44	29.15	88.60
0.0015	0.037	4.75	400	33.99	6.81	95.42
			PAN	22.87	4.58	100.00
TOTALS				498.97	100.00	100.00

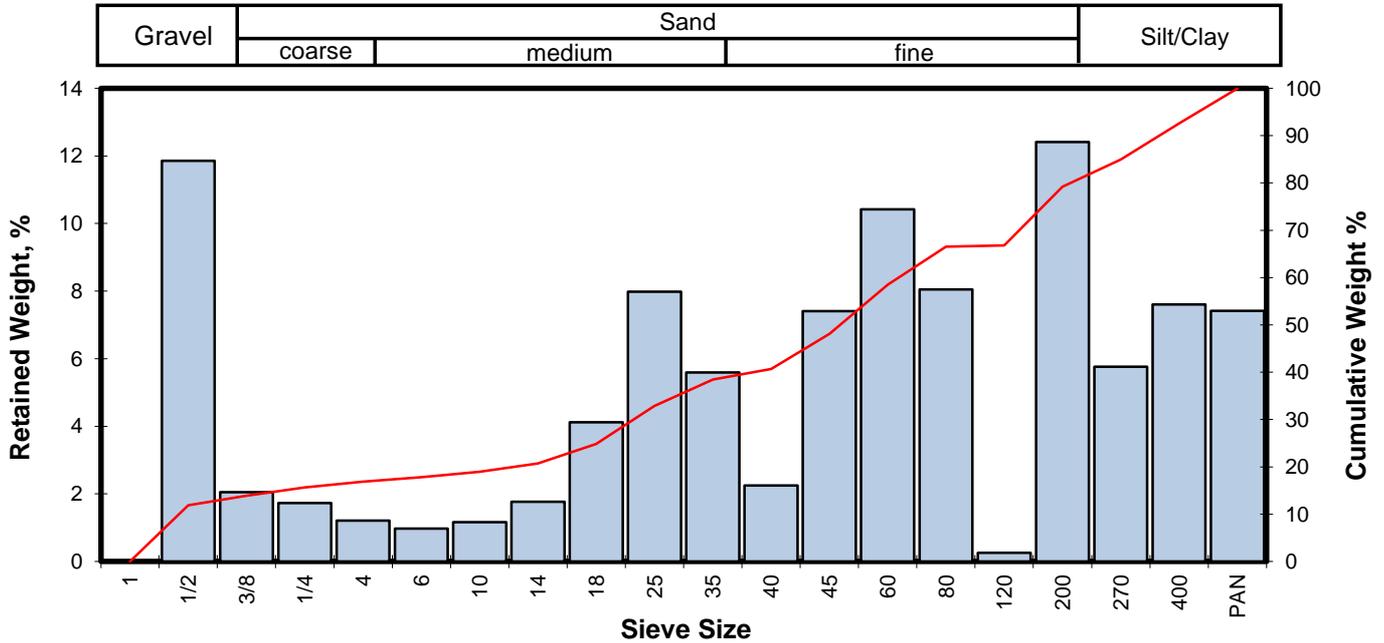
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	2.47	0.0071	0.180
10	3.06	0.0047	0.120
16	3.15	0.0044	0.113
25	3.27	0.0041	0.104
40	3.48	0.0035	0.090
50	3.62	0.0032	0.081
60	3.76	0.0029	0.074
75	4.02	0.0024	0.062
84	4.17	0.0022	0.056
90	4.35	0.0019	0.049
95	4.72	0.0015	0.038

Measure	Trask	Inman	Folk-Ward
Median, phi	3.62	3.62	3.62
Median, in.	0.0032	0.0032	0.0032
Median, mm	0.081	0.081	0.081
Mean, phi	3.60	3.66	3.65
Mean, in.	0.0033	0.0031	0.0031
Mean, mm	0.083	0.079	0.080
Sorting	1.295	0.512	0.596
Skewness	0.983	0.078	0.029
Kurtosis	0.295	1.192	1.235

Grain Size Description (ASTM-USCS Scale) Fine sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.04
Medium Sand	40	0.78
Fine Sand	200	58.64
Silt	<200	35.96
Clay	Pan	4.58
Total		100

Client: PES Environmental Inc. **IGL ID:-** 4 **IGL File No:** 2005-10
Project: American Linen **Sample ID:** MW-335-19
Project No: 1413.001.02.501B **Depth, ft:** 19-20



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	57.10	11.86	11.86
0.3740	9.500	-3.25	3/8	9.87	2.05	13.91
0.2500	6.351	-2.67	1/4	8.31	1.73	15.63
0.1873	4.757	-2.25	4	5.83	1.21	16.84
0.1324	3.364	-1.75	6	4.70	0.98	17.82
0.0787	2.000	-1.00	10	5.60	1.16	18.98
0.0557	1.414	-0.50	14	8.49	1.76	20.74
0.0394	1.000	0.00	18	19.82	4.12	24.86
0.0278	0.707	0.50	25	38.43	7.98	32.84
0.0197	0.500	1.00	35	26.93	5.59	38.43
0.0166	0.420	1.25	40	10.85	2.25	40.68
0.0139	0.354	1.50	45	35.66	7.40	48.09
0.0098	0.250	2.00	60	50.16	10.42	58.51
0.0070	0.177	2.50	80	38.78	8.05	66.56
0.0049	0.125	3.00	120	1.21	0.25	66.81
0.0029	0.074	3.75	200	59.77	12.41	79.22
0.0021	0.053	4.25	270	27.73	5.76	84.98
0.0015	0.037	4.75	400	36.63	7.61	92.58
			PAN	35.71	7.42	100.00
TOTALS				481.58	100.00	100.00

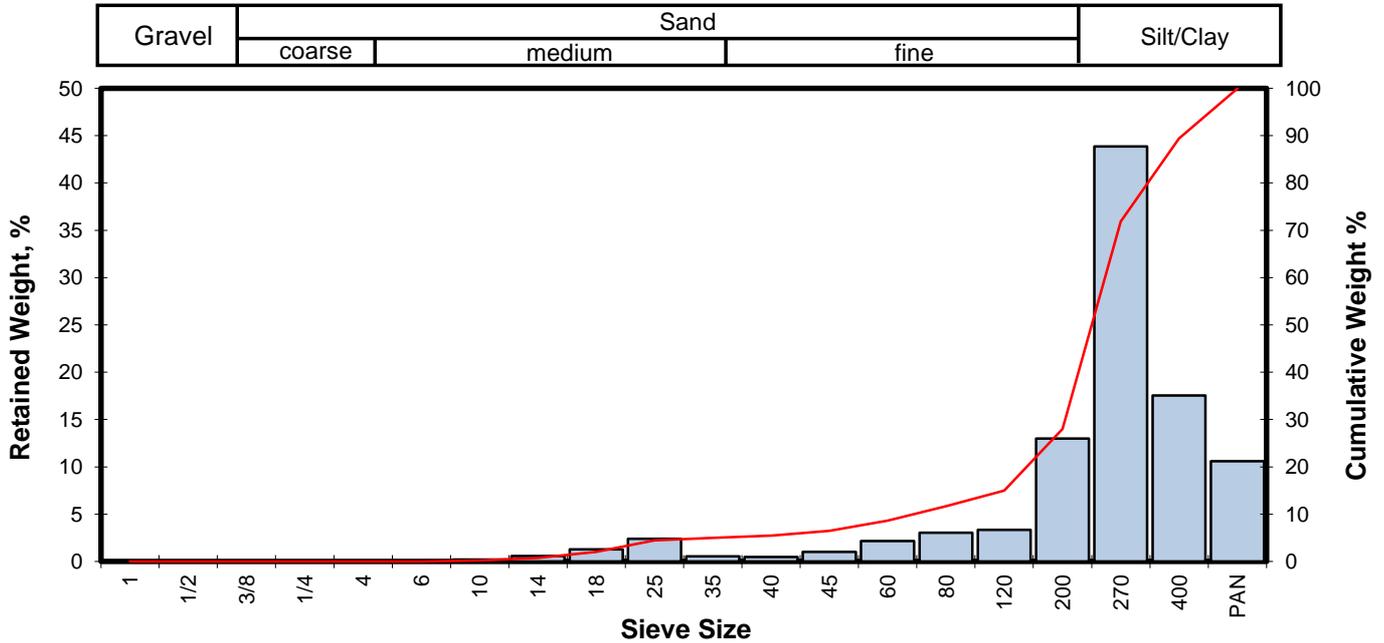
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-4.22	0.7349	18.665
10	-3.80	0.5486	13.935
16	-2.54	0.2290	5.817
25	0.01	0.0391	0.994
40	1.17	0.0174	0.443
50	1.59	0.0131	0.332
60	2.09	0.0092	0.234
75	3.49	0.0035	0.089
84	4.17	0.0022	0.056
90	4.58	0.0016	0.042
95	3.20	0.0043	0.109

Measure	Trask	Inman	Folk-Ward
Median, phi	1.59	1.59	1.59
Median, in.	0.0131	0.0131	0.0131
Median, mm	0.332	0.332	0.332
Mean, phi	0.89	0.81	1.07
Mean, in.	0.0213	0.0224	0.0187
Mean, mm	0.541	0.569	0.476
Sorting	3.348	3.353	2.801
Skewness	0.895	-0.232	-0.399
Kurtosis	0.033	0.107	0.873

Grain Size Description (ASTM-USCS Scale) Fine sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	16.84
Coarse Sand	10	2.14
Medium Sand	40	21.70
Fine Sand	200	38.54
Silt	<200	13.36
Clay	Pan	7.42
Total		100

Client: PES Environmental Inc. **IGL ID:-** 5 **IGL File No:** 2005-10
Project: American Linen **Sample ID:** MW-335-39
Project No: 1413.001.02.501B **Depth, ft:** 39-40



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.85	0.20	0.20
0.0557	1.414	-0.50	14	2.48	0.57	0.77
0.0394	1.000	0.00	18	5.56	1.28	2.05
0.0278	0.707	0.50	25	10.42	2.41	4.46
0.0197	0.500	1.00	35	2.30	0.53	4.99
0.0166	0.420	1.25	40	2.02	0.47	5.45
0.0139	0.354	1.50	45	4.43	1.02	6.48
0.0098	0.250	2.00	60	9.36	2.16	8.64
0.0070	0.177	2.50	80	13.09	3.02	11.66
0.0049	0.125	3.00	120	14.51	3.35	15.01
0.0029	0.074	3.75	200	56.22	12.98	27.99
0.0021	0.053	4.25	270	190.08	43.88	71.86
0.0015	0.037	4.75	400	75.95	17.53	89.39
			PAN	45.95	10.61	100.00
TOTALS				433.22	100.00	100.00

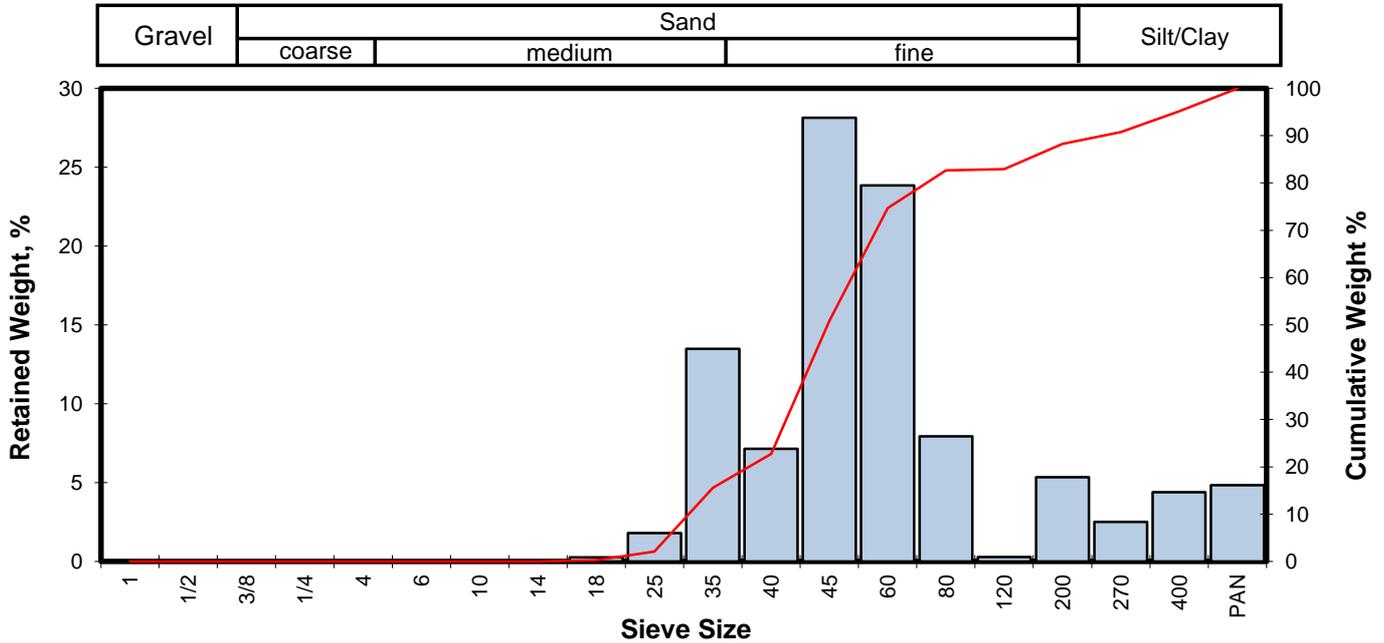
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	1.01	0.0196	0.498
10	2.23	0.0084	0.214
16	3.06	0.0047	0.120
25	3.58	0.0033	0.084
40	3.89	0.0027	0.068
50	4.00	0.0025	0.062
60	4.11	0.0023	0.058
75	4.34	0.0019	0.049
84	4.60	0.0016	0.041
90	4.48	0.0018	0.045
95	2.24	0.0083	0.212

Measure	Trask	Inman	Folk-Ward
Median, phi	4.00	4.00	4.00
Median, in.	0.0025	0.0025	0.0025
Median, mm	0.062	0.062	0.062
Mean, phi	3.91	3.83	3.88
Mean, in.	0.0026	0.0028	0.0027
Mean, mm	0.067	0.070	0.068
Sorting	1.302	0.769	0.572
Skewness	1.030	-0.226	-2.042
Kurtosis	0.102	-0.199	0.663

Grain Size Description (ASTM-USCS Scale) Silt (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.20
Medium Sand	40	5.26
Fine Sand	200	22.53
Silt	<200	61.41
Clay	Pan	10.61
Total		100

Client: PES Environmental Inc. **IGL ID:-** 6 **IGL File No:** 2005-10
Project: American Linen **Sample ID:** MW-335-68
Project No: 1413.001.02.501B **Depth, ft:** 68-69



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0557	1.414	-0.50	14	0.14	0.03	0.03
0.0394	1.000	0.00	18	1.30	0.26	0.29
0.0278	0.707	0.50	25	8.98	1.79	2.08
0.0197	0.500	1.00	35	67.44	13.48	15.56
0.0166	0.420	1.25	40	35.79	7.15	22.71
0.0139	0.354	1.50	45	140.81	28.14	50.85
0.0098	0.250	2.00	60	119.33	23.85	74.70
0.0070	0.177	2.50	80	39.69	7.93	82.63
0.0049	0.125	3.00	120	1.41	0.28	82.91
0.0029	0.074	3.75	200	26.73	5.34	88.26
0.0021	0.053	4.25	270	12.61	2.52	90.78
0.0015	0.037	4.75	400	21.96	4.39	95.17
			PAN	24.19	4.83	100.00
TOTALS				500.38	100.00	100.00

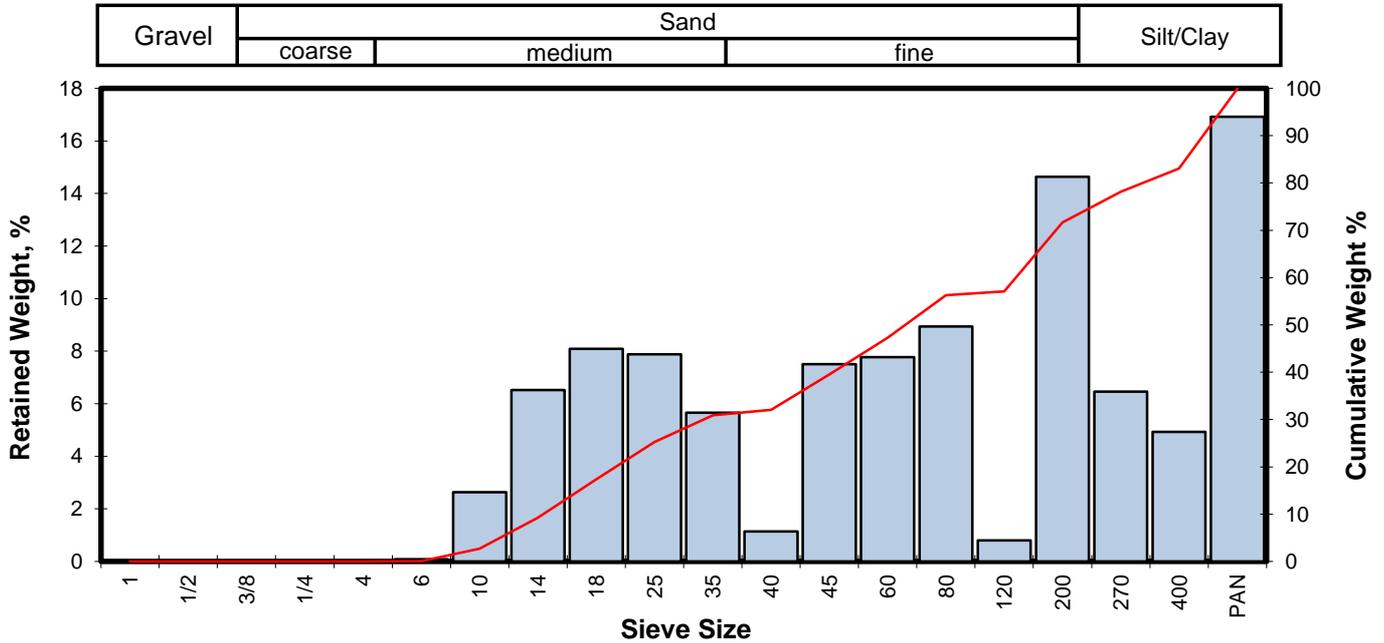
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	0.61	0.0258	0.656
10	0.79	0.0227	0.577
16	1.02	0.0195	0.495
25	1.27	0.0163	0.415
40	1.40	0.0149	0.378
50	1.49	0.0140	0.355
60	1.69	0.0122	0.310
75	2.02	0.0097	0.247
84	3.15	0.0044	0.112
90	4.10	0.0023	0.058
95	4.73	0.0015	0.038

Measure	Trask	Inman	Folk-Ward
Median, phi	1.49	1.49	1.49
Median, in.	0.0140	0.0140	0.0140
Median, mm	0.355	0.355	0.355
Mean, phi	1.60	2.08	1.89
Mean, in.	0.0130	0.0093	0.0106
Mean, mm	0.331	0.236	0.270
Sorting	1.296	1.068	1.159
Skewness	0.900	0.554	0.562
Kurtosis	0.162	0.929	2.257

Grain Size Description (ASTM-USCS Scale) Fine sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	22.71
Fine Sand	200	65.54
Silt	<200	6.91
Clay	Pan	4.83
Total		100

Client: PES Environmental Inc. **IGL ID:-** 7 **IGL File No:** 2005-10
Project: American Linen **Sample ID:** MW-336-24
Project No: 1413.001.02.501B **Depth, ft:** 23.5-24.5



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.11	0.09	0.09
0.0787	2.000	-1.00	10	3.19	2.64	2.73
0.0557	1.414	-0.50	14	7.89	6.52	9.25
0.0394	1.000	0.00	18	9.79	8.09	17.34
0.0278	0.707	0.50	25	9.54	7.89	25.23
0.0197	0.500	1.00	35	6.84	5.65	30.88
0.0166	0.420	1.25	40	1.38	1.14	32.02
0.0139	0.354	1.50	45	9.08	7.51	39.53
0.0098	0.250	2.00	60	9.41	7.78	47.31
0.0070	0.177	2.50	80	10.82	8.94	56.25
0.0049	0.125	3.00	120	0.97	0.80	57.06
0.0029	0.074	3.75	200	17.70	14.63	71.69
0.0021	0.053	4.25	270	7.82	6.46	78.15
0.0015	0.037	4.75	400	5.97	4.94	83.09
			PAN	20.46	16.91	100.00
TOTALS				120.97	100.00	100.00

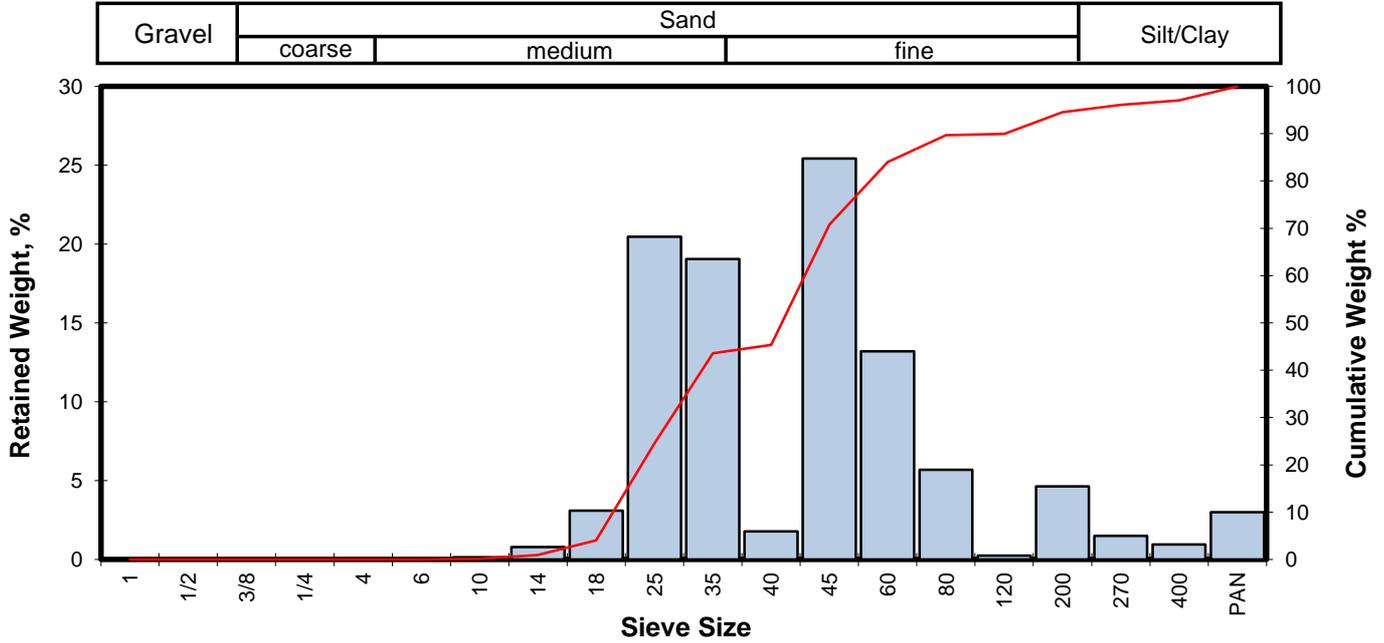
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-0.83	0.0698	1.773
10	-0.45	0.0539	1.370
16	-0.08	0.0417	1.059
25	0.49	0.0281	0.714
40	1.53	0.0136	0.346
50	2.15	0.0089	0.225
60	3.15	0.0044	0.113
75	4.01	0.0025	0.062
84	4.49	0.0017	0.044
90	2.81	0.0056	0.143
95	1.40	0.0149	0.378

Measure	Trask	Inman	Folk-Ward
Median, phi	2.15	2.15	2.15
Median, in.	0.0089	0.0089	0.0089
Median, mm	0.225	0.225	0.225
Mean, phi	1.36	2.21	2.19
Mean, in.	0.0153	0.0085	0.0086
Mean, mm	0.388	0.217	0.220
Sorting	3.388	2.288	1.482
Skewness	0.936	0.024	-0.823
Kurtosis	0.266	-0.513	0.260

Grain Size Description (ASTM-USCS Scale) Fine sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	2.73
Medium Sand	40	29.30
Fine Sand	200	39.66
Silt	<200	11.40
Clay	Pan	16.91
Total		100

Client: PES Environmental Inc. **IGL ID:-** 8 **IGL File No:** 2005-10
Project: American Linen **Sample ID:** MW-336-94
Project No: 1413.001.02.501B **Depth, ft:** 94-95



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.13	0.02	0.02
0.0787	2.000	-1.00	10	0.76	0.14	0.16
0.0557	1.414	-0.50	14	4.36	0.80	0.96
0.0394	1.000	0.00	18	16.92	3.10	4.06
0.0278	0.707	0.50	25	111.73	20.47	24.53
0.0197	0.500	1.00	35	104.00	19.05	43.58
0.0166	0.420	1.25	40	9.75	1.79	45.36
0.0139	0.354	1.50	45	138.83	25.43	70.79
0.0098	0.250	2.00	60	72.06	13.20	83.99
0.0070	0.177	2.50	80	31.11	5.70	89.69
0.0049	0.125	3.00	120	1.30	0.24	89.93
0.0029	0.074	3.75	200	25.31	4.64	94.56
0.0021	0.053	4.25	270	8.16	1.49	96.06
0.0015	0.037	4.75	400	5.16	0.95	97.00
			PAN	16.37	3.00	100.00
TOTALS				545.95	100.00	100.00

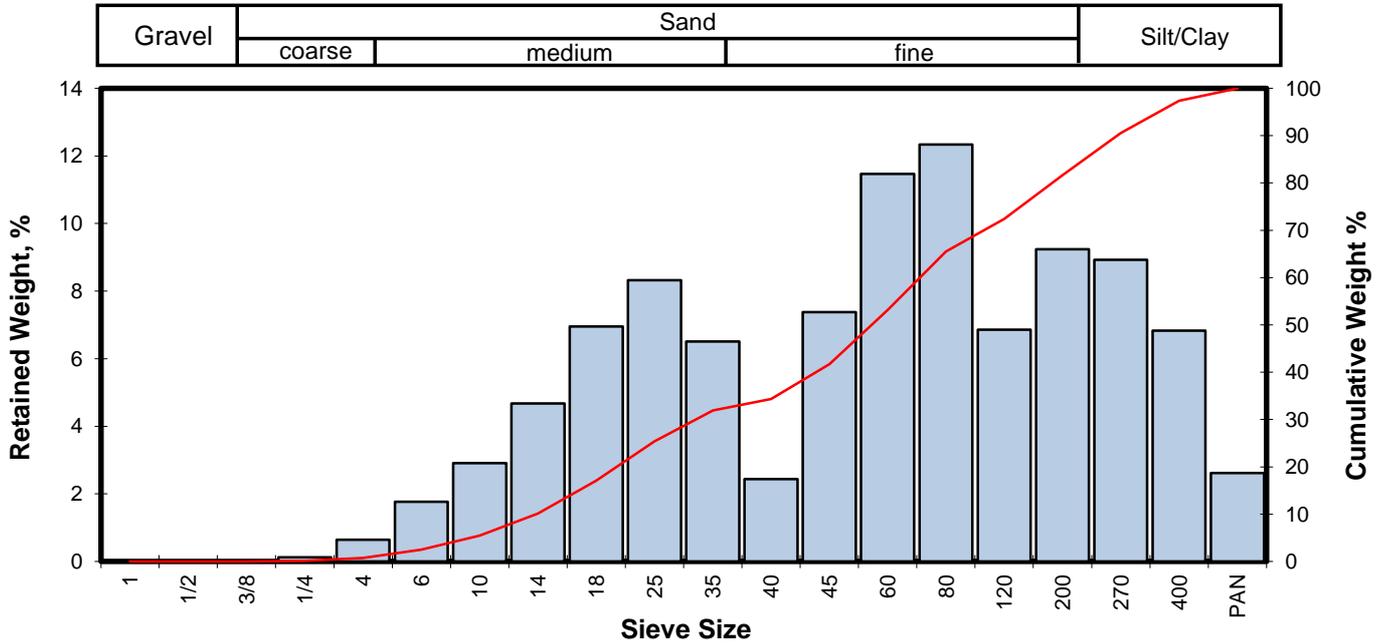
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	0.02	0.0387	0.984
10	0.15	0.0356	0.904
16	0.29	0.0322	0.817
25	0.51	0.0276	0.701
40	0.91	0.0210	0.534
50	1.30	0.0160	0.407
60	1.39	0.0150	0.381
75	1.66	0.0125	0.317
84	2.00	0.0098	0.250
90	3.01	0.0049	0.124
95	3.90	0.0026	0.067

Measure	Trask	Inman	Folk-Ward
Median, phi	1.30	1.30	1.30
Median, in.	0.0160	0.0160	0.0160
Median, mm	0.407	0.407	0.407
Mean, phi	0.97	1.15	1.20
Mean, in.	0.0200	0.0178	0.0172
Mean, mm	0.509	0.452	0.436
Sorting	1.488	0.855	1.014
Skewness	1.156	-0.175	0.084
Kurtosis	0.246	1.266	1.384

Grain Size Description (ASTM-USCS Scale) Fine sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.16
Medium Sand	40	45.20
Fine Sand	200	49.20
Silt	<200	2.44
Clay	Pan	3.00
Total		100

Client: PES Environmental Inc. **IGL ID:- 9** **IGL File No:** 2005-10
Project: American Linen **Sample ID:** MW-334-26
Project No: 1413.001.02.501B **Depth, ft:** 26-27



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.50	0.12	0.12
0.1873	4.757	-2.25	4	2.71	0.64	0.76
0.1324	3.364	-1.75	6	7.46	1.77	2.53
0.0787	2.000	-1.00	10	12.26	2.91	5.44
0.0557	1.414	-0.50	14	19.72	4.68	10.11
0.0394	1.000	0.00	18	29.30	6.95	17.06
0.0278	0.707	0.50	25	35.11	8.33	25.39
0.0197	0.500	1.00	35	27.46	6.51	31.90
0.0166	0.420	1.25	40	10.28	2.44	34.34
0.0139	0.354	1.50	45	31.13	7.38	41.72
0.0098	0.250	2.00	60	48.37	11.47	53.19
0.0070	0.177	2.50	80	52.02	12.34	65.53
0.0049	0.125	3.00	120	28.93	6.86	72.39
0.0029	0.074	3.75	200	38.95	9.24	81.62
0.0021	0.053	4.25	270	37.65	8.93	90.55
0.0015	0.037	4.75	400	28.81	6.83	97.38
			PAN	11.04	2.62	100.00
TOTALS				421.70	100.00	100.00

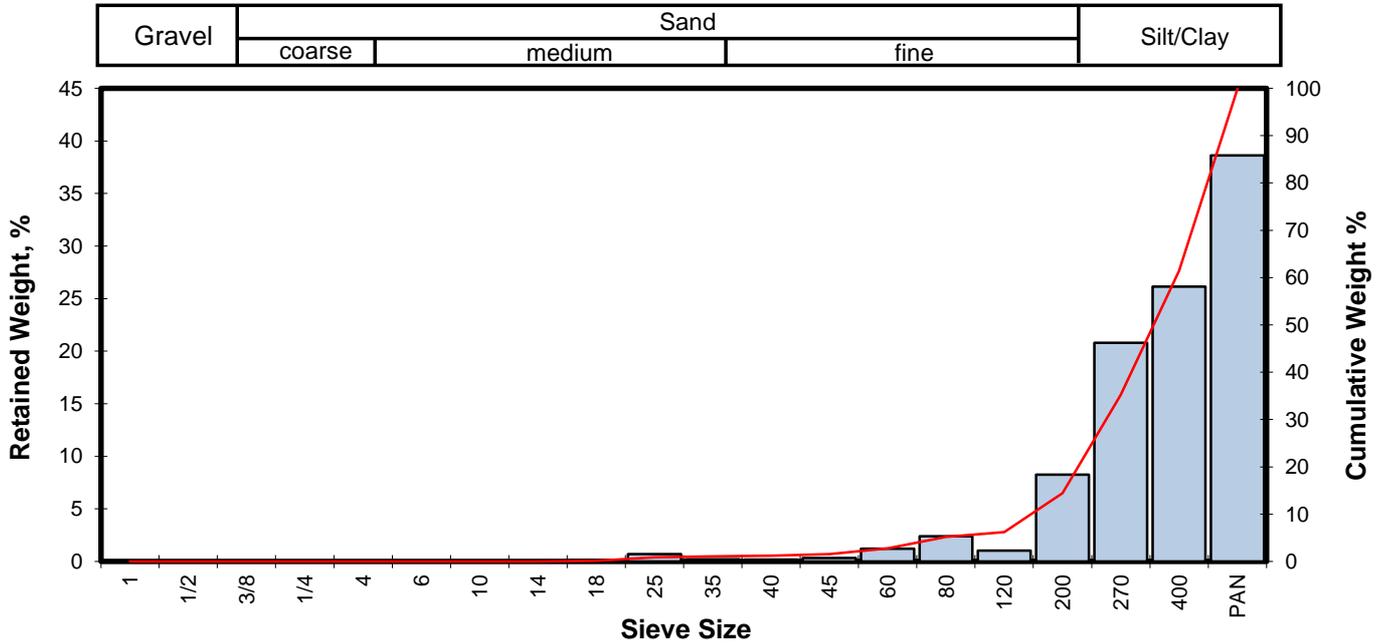
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-1.11	0.0851	2.163
10	-0.51	0.0561	1.426
16	-0.08	0.0415	1.054
25	0.48	0.0283	0.719
40	1.44	0.0145	0.368
50	1.86	0.0108	0.275
60	2.28	0.0081	0.206
75	3.21	0.0042	0.108
84	3.88	0.0027	0.068
90	4.22	0.0021	0.054
95	4.58	0.0017	0.042

Measure	Trask	Inman	Folk-Ward
Median, phi	1.86	1.86	1.86
Median, in.	0.0108	0.0108	0.0108
Median, mm	0.275	0.275	0.275
Mean, phi	1.27	1.90	1.89
Mean, in.	0.0163	0.0105	0.0106
Mean, mm	0.413	0.267	0.270
Sorting	2.581	1.980	1.852
Skewness	1.011	0.021	-0.012
Kurtosis	0.222	0.437	0.852

Grain Size Description (ASTM-USCS Scale) Fine sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.76
Coarse Sand	10	4.68
Medium Sand	40	28.90
Fine Sand	200	47.28
Silt	<200	15.76
Clay	Pan	2.62
Total		100

Client: PES Environmental Inc. **IGL ID:-** 10 **IGL File No:** 2005-10
Project: American Linen **Sample ID:** MW-338-47
Project No: 1413.001.02.501B **Depth, ft:** 47-48



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0557	1.414	-0.50	14	0.07	0.02	0.02
0.0394	1.000	0.00	18	0.51	0.13	0.15
0.0278	0.707	0.50	25	2.71	0.70	0.85
0.0197	0.500	1.00	35	0.78	0.20	1.05
0.0166	0.420	1.25	40	0.66	0.17	1.22
0.0139	0.354	1.50	45	1.29	0.33	1.56
0.0098	0.250	2.00	60	4.69	1.21	2.77
0.0070	0.177	2.50	80	9.31	2.41	5.18
0.0049	0.125	3.00	120	3.93	1.02	6.20
0.0029	0.074	3.75	200	31.85	8.25	14.45
0.0021	0.053	4.25	270	80.28	20.79	35.24
0.0015	0.037	4.75	400	100.90	26.13	61.37
			PAN	149.17	38.63	100.00
TOTALS				386.15	100.00	100.00

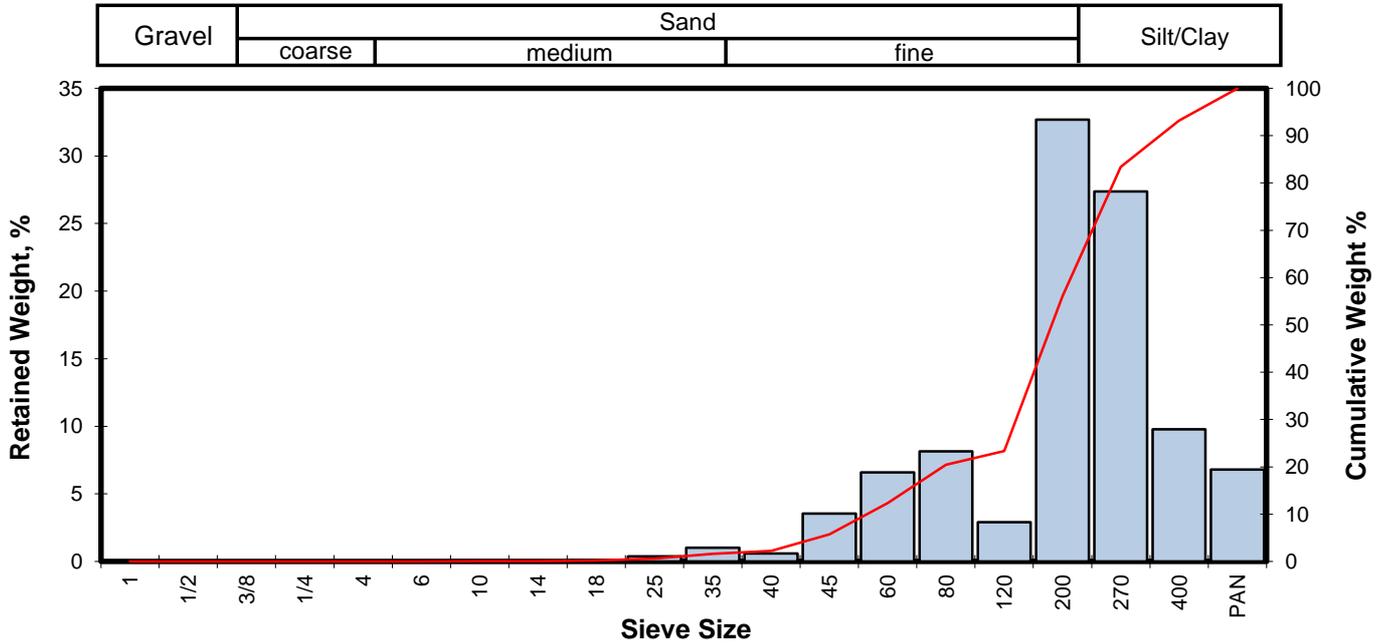
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	2.46	0.0071	0.182
10	3.35	0.0039	0.098
16	3.79	0.0029	0.072
25	4.00	0.0025	0.062
40	4.34	0.0019	0.049
50	4.53	0.0017	0.043
60	4.72	0.0015	0.038
75	3.07	0.0047	0.119
84	1.97	0.0101	0.256
90	1.23	0.0168	0.426
95	0.61	0.0257	0.653

Measure	Trask	Inman	Folk-Ward
Median, phi	4.53	4.53	4.53
Median, in.	0.0017	0.0017	0.0017
Median, mm	0.043	0.043	0.043
Mean, phi	3.47	2.88	3.43
Mean, in.	0.0036	0.0054	0.0037
Mean, mm	0.091	0.136	0.093
Sorting	0.725	-0.910	-0.735
Skewness	1.991	1.819	2.531
Kurtosis	0.086	0.015	0.814

Grain Size Description (ASTM-USCS Scale) Silt (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	1.22
Fine Sand	200	13.23
Silt	<200	46.92
Clay	Pan	38.63
Total		100

Client: PES Environmental Inc. **IGL ID:-** 11 **IGL File No:** 2005-10
Project: American Linen **Sample ID:** MW-338-54
Project No: 1413.001.02.501B **Depth, ft:** 54-55



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.41	0.08	0.08
0.0557	1.414	-0.50	14	0.12	0.02	0.10
0.0394	1.000	0.00	18	0.53	0.10	0.20
0.0278	0.707	0.50	25	2.11	0.39	0.58
0.0197	0.500	1.00	35	5.54	1.02	1.60
0.0166	0.420	1.25	40	3.21	0.59	2.20
0.0139	0.354	1.50	45	19.17	3.53	5.73
0.0098	0.250	2.00	60	35.80	6.60	12.33
0.0070	0.177	2.50	80	44.20	8.14	20.47
0.0049	0.125	3.00	120	15.73	2.90	23.37
0.0029	0.074	3.75	200	177.40	32.69	56.06
0.0021	0.053	4.25	270	148.52	27.37	83.43
0.0015	0.037	4.75	400	53.00	9.77	93.19
			PAN	36.95	6.81	100.00
TOTALS				542.69	100.00	100.00

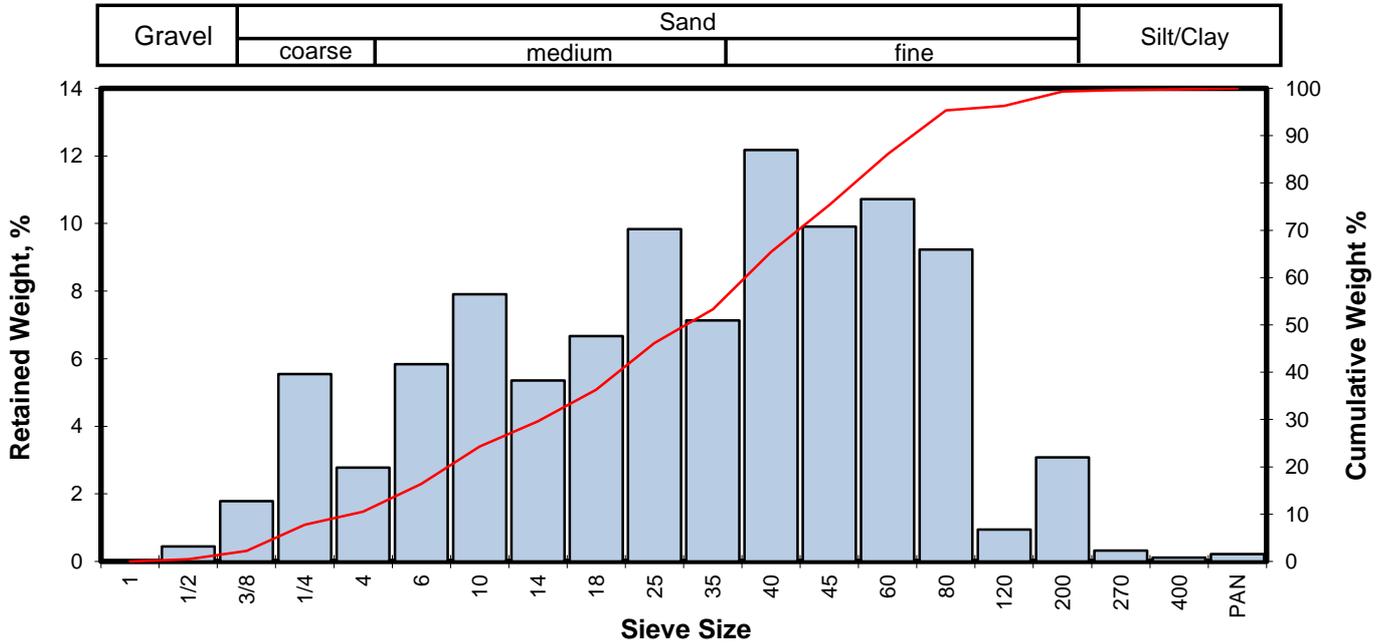
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	1.45	0.0144	0.366
10	1.82	0.0111	0.282
16	2.23	0.0084	0.214
25	3.04	0.0048	0.122
40	3.38	0.0038	0.096
50	3.61	0.0032	0.082
60	3.82	0.0028	0.071
75	4.10	0.0023	0.058
84	4.28	0.0020	0.051
90	4.59	0.0016	0.042
95	3.49	0.0035	0.089

Measure	Trask	Inman	Folk-Ward
Median, phi	3.61	3.61	3.61
Median, in.	0.0032	0.0032	0.0032
Median, mm	0.082	0.082	0.082
Mean, phi	3.47	3.25	3.37
Mean, in.	0.0035	0.0041	0.0038
Mean, mm	0.090	0.105	0.097
Sorting	1.443	1.027	0.823
Skewness	1.031	-0.349	-0.735
Kurtosis	0.131	-0.007	0.790

Grain Size Description (ASTM-USCS Scale) Fine sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.08
Medium Sand	40	2.12
Fine Sand	200	53.86
Silt	<200	37.13
Clay	Pan	6.81
Total		100

Client: PES Environmental Inc. **IGL ID:-** 12 **IGL File No:** 2005-10
Project: American Linen **Sample ID:** MW-341-90
Project No: 1413.001.02.501B **Depth, ft:** 90-91



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	3.07	0.44	0.44
0.3740	9.500	-3.25	3/8	12.46	1.79	2.23
0.2500	6.351	-2.67	1/4	38.66	5.55	7.78
0.1873	4.757	-2.25	4	19.37	2.78	10.56
0.1324	3.364	-1.75	6	40.65	5.83	16.39
0.0787	2.000	-1.00	10	55.09	7.91	24.30
0.0557	1.414	-0.50	14	37.33	5.36	29.65
0.0394	1.000	0.00	18	46.46	6.67	36.32
0.0278	0.707	0.50	25	68.55	9.84	46.16
0.0197	0.500	1.00	35	49.67	7.13	53.29
0.0166	0.420	1.25	40	84.88	12.18	65.47
0.0139	0.354	1.50	45	69.02	9.91	75.37
0.0098	0.250	2.00	60	74.71	10.72	86.10
0.0070	0.177	2.50	80	64.33	9.23	95.33
0.0049	0.125	3.00	120	6.56	0.94	96.27
0.0029	0.074	3.75	200	21.46	3.08	99.35
0.0021	0.053	4.25	270	2.22	0.32	99.67
0.0015	0.037	4.75	400	0.82	0.12	99.78
			PAN	1.50	0.22	100.00
TOTALS				696.81	100.00	100.00

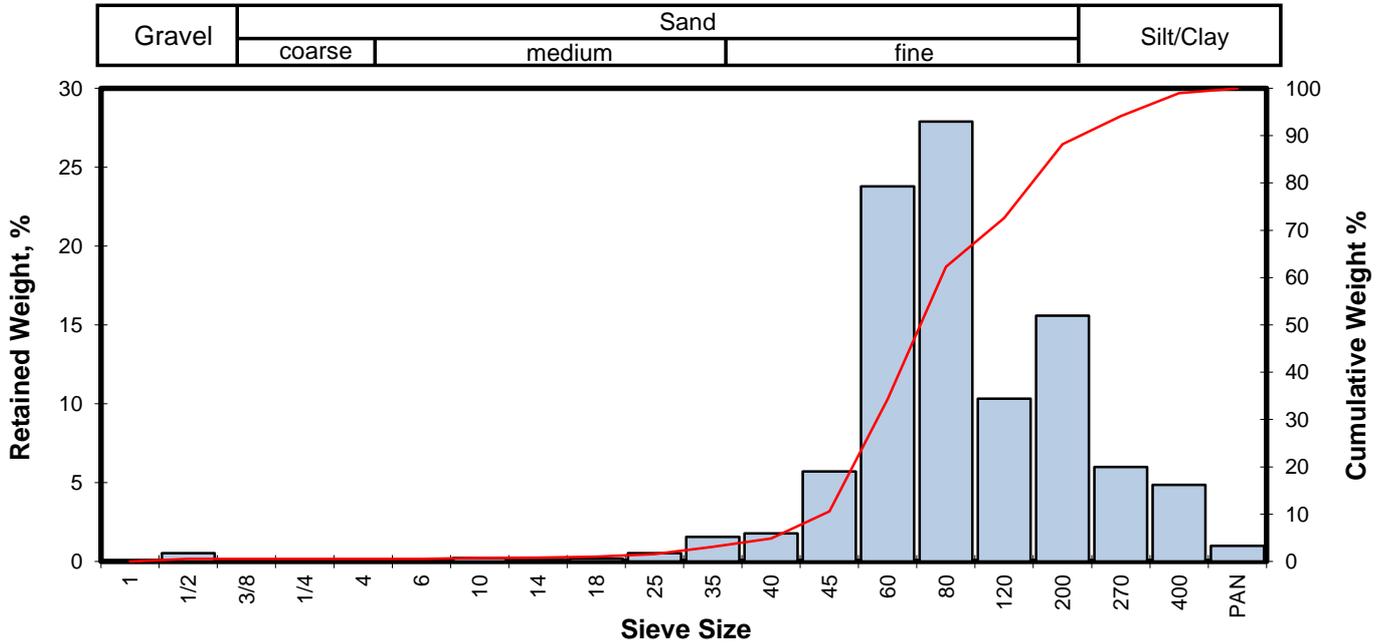
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-2.96	0.3059	7.769
10	-2.33	0.1984	5.040
16	-1.78	0.1355	3.443
25	-0.93	0.0752	1.911
40	0.19	0.0346	0.878
50	0.77	0.0231	0.587
60	1.14	0.0179	0.454
75	1.49	0.0140	0.356
84	1.90	0.0105	0.268
90	2.21	0.0085	0.216
95	2.48	0.0070	0.179

Measure	Trask	Inman	Folk-Ward
Median, phi	0.77	0.77	0.77
Median, in.	0.0231	0.0231	0.0231
Median, mm	0.587	0.587	0.587
Mean, phi	-0.18	0.06	0.30
Mean, in.	0.0446	0.0378	0.0321
Mean, mm	1.133	0.960	0.814
Sorting	2.317	1.843	1.746
Skewness	1.406	-0.385	-0.378
Kurtosis	0.161	0.476	0.919

Grain Size Description Medium sand
 (ASTM-USCS Scale) (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	10.56
Coarse Sand	10	13.74
Medium Sand	40	41.17
Fine Sand	200	33.88
Silt	<200	0.44
Clay	Pan	0.22
Total		100

Client: PES Environmental Inc. **IGL ID:-** 13 **IGL File No:** 2005-10
Project: American Linen **Sample ID:** MW-341-102
Project No: 1413.001.02.501B **Depth, ft:** 102-103



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	2.99	0.53	0.53
0.3740	9.500	-3.25	3/8	0.00	0.00	0.53
0.2500	6.351	-2.67	1/4	0.00	0.00	0.53
0.1873	4.757	-2.25	4	0.11	0.02	0.55
0.1324	3.364	-1.75	6	0.00	0.00	0.55
0.0787	2.000	-1.00	10	1.24	0.22	0.77
0.0557	1.414	-0.50	14	0.31	0.06	0.83
0.0394	1.000	0.00	18	1.07	0.19	1.02
0.0278	0.707	0.50	25	2.92	0.52	1.53
0.0197	0.500	1.00	35	8.77	1.56	3.09
0.0166	0.420	1.25	40	9.99	1.77	4.87
0.0139	0.354	1.50	45	32.12	5.71	10.57
0.0098	0.250	2.00	60	133.93	23.79	34.36
0.0070	0.177	2.50	80	157.05	27.90	62.26
0.0049	0.125	3.00	120	58.09	10.32	72.58
0.0029	0.074	3.75	200	87.79	15.60	88.18
0.0021	0.053	4.25	270	33.69	5.98	94.16
0.0015	0.037	4.75	400	27.31	4.85	99.01
			PAN	5.55	0.99	100.00
TOTALS				562.93	100.00	100.00

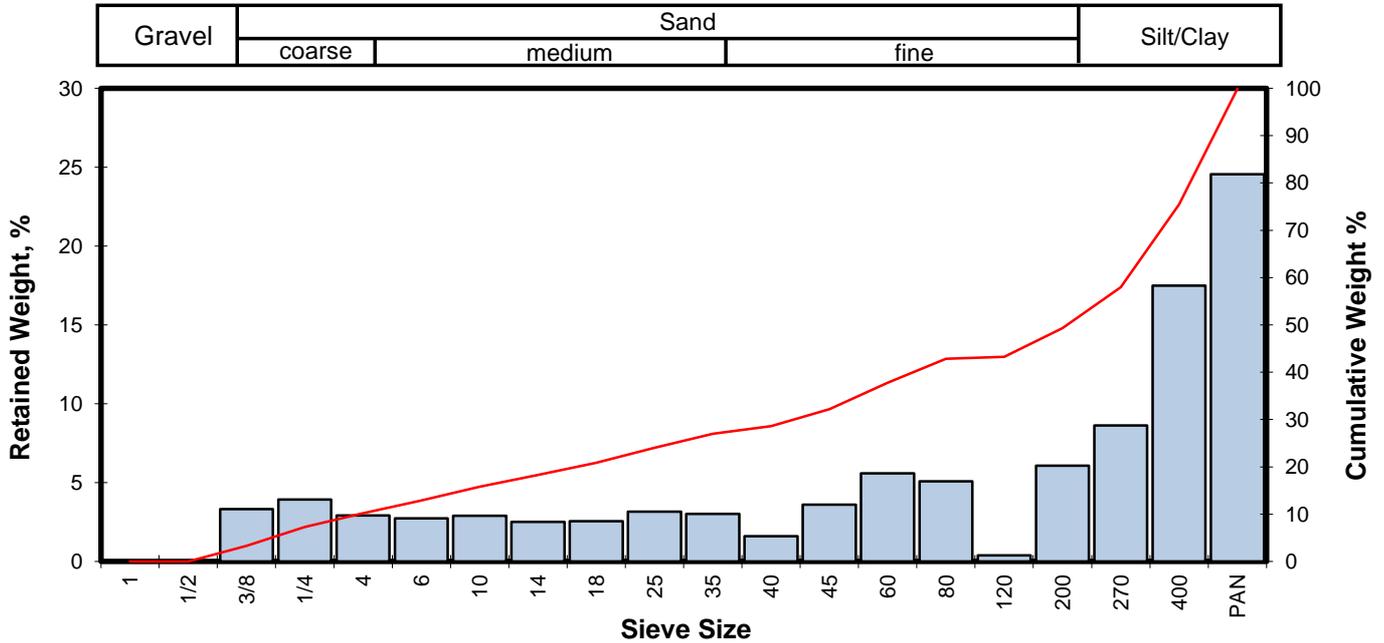
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	1.26	0.0165	0.419
10	1.47	0.0142	0.360
16	1.61	0.0129	0.327
25	1.80	0.0113	0.287
40	2.10	0.0092	0.233
50	2.28	0.0081	0.206
60	2.46	0.0072	0.182
75	3.12	0.0045	0.115
84	3.55	0.0034	0.085
90	3.90	0.0026	0.067
95	4.34	0.0019	0.050

Measure	Trask	Inman	Folk-Ward
Median, phi	2.28	2.28	2.28
Median, in.	0.0081	0.0081	0.0081
Median, mm	0.206	0.206	0.206
Mean, phi	2.32	2.58	2.48
Mean, in.	0.0079	0.0066	0.0071
Mean, mm	0.201	0.167	0.179
Sorting	1.576	0.968	0.950
Skewness	0.883	0.311	0.323
Kurtosis	0.292	0.592	0.961

Grain Size Description (ASTM-USCS Scale) Fine sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.55
Coarse Sand	10	0.22
Medium Sand	40	4.10
Fine Sand	200	83.31
Silt	<200	10.84
Clay	Pan	0.99
Total		100

Client: PES Environmental Inc. **IGL ID:-** 14 **IGL File No:** 2005-10
Project: American Linen **Sample ID:** MW-337-15
Project No: 1413.001.02.501B **Depth, ft:** 15.25-15.5



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	11.86	3.33	3.33
0.2500	6.351	-2.67	1/4	14.00	3.93	7.26
0.1873	4.757	-2.25	4	10.37	2.91	10.17
0.1324	3.364	-1.75	6	9.72	2.73	12.90
0.0787	2.000	-1.00	10	10.32	2.90	15.80
0.0557	1.414	-0.50	14	8.91	2.50	18.30
0.0394	1.000	0.00	18	9.10	2.55	20.85
0.0278	0.707	0.50	25	11.24	3.16	24.01
0.0197	0.500	1.00	35	10.74	3.01	27.02
0.0166	0.420	1.25	40	5.69	1.60	28.62
0.0139	0.354	1.50	45	12.82	3.60	32.22
0.0098	0.250	2.00	60	19.90	5.59	37.80
0.0070	0.177	2.50	80	18.07	5.07	42.88
0.0049	0.125	3.00	120	1.38	0.39	43.26
0.0029	0.074	3.75	200	21.65	6.08	49.34
0.0021	0.053	4.25	270	30.74	8.63	57.97
0.0015	0.037	4.75	400	62.27	17.48	75.45
			PAN	87.46	24.55	100.00
TOTALS				356.24	100.00	100.00

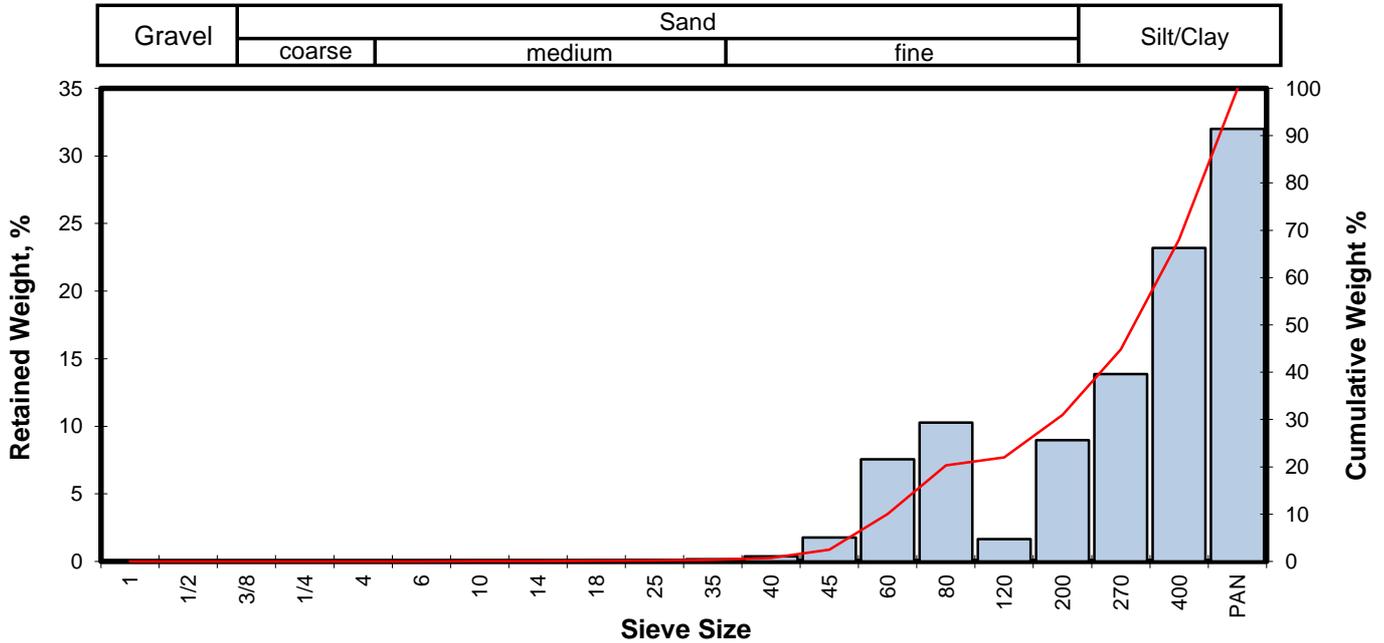
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-3.00	0.3152	8.006
10	-2.27	0.1905	4.838
16	-0.96	0.0765	1.944
25	0.66	0.0248	0.631
40	2.22	0.0085	0.215
50	3.79	0.0028	0.072
60	4.31	0.0020	0.050
75	4.74	0.0015	0.037
84	3.10	0.0046	0.117
90	1.93	0.0103	0.262
95	0.97	0.0201	0.511

Measure	Trask	Inman	Folk-Ward
Median, phi	3.79	3.79	3.79
Median, in.	0.0028	0.0028	0.0028
Median, mm	0.072	0.072	0.072
Mean, phi	1.58	1.07	1.97
Mean, in.	0.0132	0.0188	0.0100
Mean, mm	0.334	0.477	0.254
Sorting	4.102	2.027	1.615
Skewness	2.125	-1.342	-1.882
Kurtosis	0.065	-0.021	0.399

Grain Size Description (ASTM-USCS Scale) Silt (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	10.17
Coarse Sand	10	5.63
Medium Sand	40	12.82
Fine Sand	200	20.72
Silt	<200	26.11
Clay	Pan	24.55
Total		100

Client: PES Environmental Inc. **IGL ID:-** 16 **IGL File No:** 2005-10
Project: American Linen **Sample ID:** MW-340-47
Project No: 1413.001.02.501B **Depth, ft:** 47.0-47.3



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.12	0.04	0.04
0.0557	1.414	-0.50	14	0.08	0.02	0.06
0.0394	1.000	0.00	18	0.16	0.05	0.11
0.0278	0.707	0.50	25	0.30	0.09	0.20
0.0197	0.500	1.00	35	0.52	0.16	0.35
0.0166	0.420	1.25	40	1.24	0.37	0.72
0.0139	0.354	1.50	45	5.91	1.76	2.49
0.0098	0.250	2.00	60	25.35	7.56	10.05
0.0070	0.177	2.50	80	34.44	10.27	20.32
0.0049	0.125	3.00	120	5.57	1.66	21.98
0.0029	0.074	3.75	200	30.05	8.96	30.95
0.0021	0.053	4.25	270	46.45	13.86	44.80
0.0015	0.037	4.75	400	77.78	23.20	68.01
			PAN	107.24	31.99	100.00
TOTALS				335.21	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	1.67	0.0124	0.315
10	2.00	0.0099	0.251
16	2.29	0.0081	0.205
25	3.25	0.0041	0.105
40	4.08	0.0023	0.059
50	4.36	0.0019	0.049
60	4.58	0.0016	0.042
75	3.71	0.0030	0.076
84	2.38	0.0076	0.193
90	1.48	0.0141	0.357
95	0.74	0.0235	0.598

Measure	Trask	Inman	Folk-Ward
Median, phi	4.36	4.36	4.36
Median, in.	0.0019	0.0019	0.0019
Median, mm	0.049	0.049	0.049
Mean, phi	3.46	2.33	3.01
Mean, in.	0.0036	0.0078	0.0049
Mean, mm	0.091	0.199	0.124
Sorting	1.173	0.043	-0.119
Skewness	1.840	-47.239	-20.202
Kurtosis	-0.134	-11.754	-0.824

Grain Size Description (ASTM-USCS Scale) Silt (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.04
Medium Sand	40	0.69
Fine Sand	200	30.23
Silt	<200	37.06
Clay	Pan	31.99
Total		100

(formerly PTS Laboratories, Inc.)

COMPANY: PES ENVIRONMENTAL, INC.
 ADDRESS: CITY ZIP CODE
 1215 4th Ave Suite 1350, Seattle WA 98161
 PROJECT MANAGER NAME: EMAIL PHONE #
 Bill Haldeman BHaldeman@pesenv.com 206-529-3980
 PROJECT NAME: American Linen
 PROJECT NUMBER: 1413.001.02.501B
 SITE LOCATION: Seattle, WA
 SAMPLER SIGNATURE: *R. M. ...*

ANALYSIS REQUEST

NUMBER OF SAMPLES	SOIL PROPERTIES PACKAGE	HYDRAULIC CONDUCTIVITY	PORE FLUID SATURATION PACKAGE	TCEQ/TNRCC PROPERTIES PACKAGE	CAPILLARITY PACKAGE	FLUID PROPERTIES PACKAGE	CORE PHOTOGRAPHY	VAPOR TRANSPORT PACKAGE	POROSITY: TOTAL, AIR-FILLED, WATER-FILLED	PROSITY: EFFECTIVE, ASTM D425M	SPECIFIC GRAVITY, ASTM D854	BULK DENSITY (DRY), API RP40 or ASTM D2937	AIR PERMEABILITY, API RP40	HYDRAULIC CONDUCTIVITY, EPA 9100/API RP40 OR ASTM D5084	GRAIN SIZE DISTRIBUTION, ASTM D422 or D4464M	TOC: WALKLEY-BLACK /FOC	ATTERBERG LIMITS, ASTM D4318	VAPOR INTRUSION PACKAGE	FREE PRODUCT MOBILITY PACKAGE
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PO #:
 BILLING ADDRESS: SAME AS LEF
 BILLING EMAIL: BHALDEMAN@PESE
 BILLING CONTACT: Bill Haldeman
 BILLING PHONE #: 206-529-3980
TURNAROUND TIME
 24 HOURS 5 DAYS
 72 HOURS NORMAL
 OTHERS:
SAMPLE INTEGRITY (CHECK INTACT: TEMP (F))
 IGL QUOTE NO/DATE
 IGL FILE NO
 2005-10
 COMMENTS

SAMPLE ID	DATE	TIME	DEPTH, FEET	NUMBER OF SAMPLES	SOIL PROPERTIES PACKAGE	HYDRAULIC CONDUCTIVITY	PORE FLUID SATURATION PACKAGE	TCEQ/TNRCC PROPERTIES PACKAGE	CAPILLARITY PACKAGE	FLUID PROPERTIES PACKAGE	CORE PHOTOGRAPHY	VAPOR TRANSPORT PACKAGE	POROSITY: TOTAL, AIR-FILLED, WATER-FILLED	PROSITY: EFFECTIVE, ASTM D425M	SPECIFIC GRAVITY, ASTM D854	BULK DENSITY (DRY), API RP40 or ASTM D2937	AIR PERMEABILITY, API RP40	HYDRAULIC CONDUCTIVITY, EPA 9100/API RP40 OR ASTM D5084	GRAIN SIZE DISTRIBUTION, ASTM D422 or D4464M	TOC: WALKLEY-BLACK /FOC	ATTERBERG LIMITS, ASTM D4318	VAPOR INTRUSION PACKAGE	FREE PRODUCT MOBILITY PACKAGE	
MW-343-78	4/13/20	15:35	77-78	1															X					
MW-343-104	4/14/20	11:07	103-104	1															X	X				
MW-331-44	4/17/20	13:41	44-45	1															X	X				
MW-335-19	4/21/20	10:00	19-20	1															X					
MW-335-39	4/21/20	10:55	39-40	1															X					
MW-335-68	4/21/20	12:10	68-69	1															X					
MW-336-24	4/22/20	10:00	23.5-24.5	1															X					
MW-336-94	4/22/20	14:00	94-95	1															X					
MW-334-26	4/16/20	09:47	26-27	1															X					
MW-338-47	5/01/20	12:00	47-48	1															X					
MW-338-54	5/01/20	12:30	54-55	1															X	X				
MW-341-90	5/04/20	14:50	90-91	1															X	X				

1. RELINQUISHED BY: <i>[Signature]</i>	2. RECEIVED BY: <i>[Signature]</i>	1. RELINQUISHED BY:	2. RECEIVED BY:
COMPANY: PES Environmental	COMPANY: IGL	COMPANY:	COMPANY:
DATE: 5/14/20 TIME: 12:00	DATE: 5/19/20 TIME: 0200	DATE:	DATE:



INTEGRATED GEOSCIENCES LABORATORIES, LLC

*Environmental * Geotechnical * Core Analysis*

6016 Centralcrest Street • Houston, Texas 77092
Telephone (713) 316-1800 • Fax (877) 255-9953

October 27, 2019

Bill Haldeman.
Project Manager,
PES Environmental, Inc.
1215 4th Avenue, Ste 1350.
Seattle, WA 98161.

Re: IGL File No: **49143**
Project Name: American Linen.
Project Number: 1413-001-02-501B.
Site Location: Seattle, WA.

Subject: Final Report: Dry Bulk Density-(ASTM D2937), Hydraulic Conductivity-(ASTM-D5084), Total Organic Carbon-(Walkley-Black) and Combo Size Analysis-(ASTM D422+D4464).

Dear Bill Haldeman.

As you may have been informed, Integrated Geosciences Laboratories, LLC acquired PTS Laboratories effective September 1, 2019. Therefore, all communications regarding future and current projects (including this) are being executed in the new name.

Please find enclosed report for Physical Properties analyses conducted upon samples received from your "**American Linen**" project. All analyses were performed by applicable ASTM, EPA, or API methodologies. The samples are currently in storage and will be retained for thirty days past the completion of testing at no charge. Please note that the samples will be disposed of at that time. You may contact me regarding storage, disposal, or return of the samples.

Integrated Geosciences Laboratories appreciate the opportunity to be of service. If you have any questions or require additional information, please contact me or Emeka Anazodo at (713) 316-1800.

Sincerely,
Integrated Geosciences Laboratories, LLC.

C.A.Umeh

Chidi Umeh
Technical Consultant.
Encl.

Integrated Geosciences Laboratories, LLC

Project Name: American Linen
 Project Number: 1413-001-02-501B
 Site Location: Seattle, WA

IGL File No: 49143
 Client: PES Environmental, Inc.

TEST PROGRAM - 20191016

Serial NO	CORE ID	Date Sampled	Depth ft.	Core Recovery ft.	Dry Bulk Density ASTM D2937	Hydraulic Conductivity ASTM D5084	TOC/foc Walkley-Black	Grain Size Analysis ASTM D422+D4464	Comments
				CORE		Vert. 1.5"	Grab	Grab	
		Date Received: 20191015							
1	MW-323-43.5	09/28/19	43.5-44	0.50	X	X	X		2.5"x6" Brass tube
2	MW-323-32.5	09/28/19	32.5-33.5	0.63	X	X	X		NOT IN RING; 4"x7.5" unsleeved core
3	MW-323-100	09/28/19	100-101	1.00	X	X	X		2.5"x12" Brass tube
4	MW-303-65	10/03/19	65-66	1.00	X	X	X		2.5"x12" Brass tube
5	MW-303-80	10/03/19	80-81	1.00	X	X	X		2.5"x12" SS tube
6	MW-308-33	09/20/19	33-34	1.00	X	X	X		2.5"x12" Brass tube
7	MW-308-40	09/20/19	40-41	1.00	X		X		2.5"x12" Brass tube
8	MW-307-44	10/03/19	44	1.00				X	Grab in ziplock bag
9	MW-319-28	09/18/19	28	1.00				X	Grab in ziplock bag
10	MW-316-37	09/09/19	37	1.00				X	Grab in ziplock bag
11	MW-302-33	10/01/19	33	1.00				X	Grab in ziplock bag
12	MW-324-30	09/12/19	30	1.00				X	Grab in ziplock bag
13	MW-302-60	10/01/19	60	1.00				X	Grab in ziplock bag
14	MW-190-48	09/19/19	48	1.00				X	Grab in ziplock bag
15	MW-316-58	09/09/19	58	1.00				X	Grab in ziplock bag
16	MW-311-48	09/18/19	48	1.00				X	Grab in ziplock bag
17	MW-309-59	09/19/19	59	1.00				X	Grab in ziplock bag
18	MW-322-32	09/17/19	32	1.00				X	Grab in ziplock bag
19	MW-329-70	09/12/19	70	1.00				X	Grab in ziplock bag

Integrated Geosciences Laboratories, LLC

Project Name: American Linen
 Project Number: 1413-001-02-501B
 Site Location: Seattle, WA

IGL File No: 49143
 Client: PES Environmental, Inc.

TEST PROGRAM - 20191016

Serial NO	CORE ID	Date Sampled	Depth ft.	Core Recovery ft.	Dry Bulk Density ASTM D2937	Hydraulic Conductivity ASTM D5084	TOC/foc Walkley-Black	Grain Size Analysis ASTM D422+D4464	Comments
				CORE		Vert. 1.5"	Grab	Grab	
20	MW-328-70	09/16/19	70	1.00			X	X	Grab in ziplock bag
21	MW-304-81	10/02/19	81	1.00				X	Grab in ziplock bag
22	MW-329-105	09/12/19	105	1.00				X	Grab in ziplock bag
23	MW-304-108	10/02/19	108	1.00			X	X	Grab in ziplock bag
24	MW-324-38	09/12/19	38	1.00				X	Grab in ziplock bag
25	MW-314-43	09/13/19	43	1.00				X	Grab in ziplock bag
26	MW-326-39	09/09/19	39	1.00				X	Grab in ziplock bag
27	MW-311-40	09/18/19	40	1.00			X	X	Grab in ziplock bag
28	MW-328-45	09/16/19	45	1.00				X	Grab in ziplock bag
TOTALS:			28	27.13	7	6	10	21	

Laboratory Test Program Notes

Contaminant identification:

Standard TAT for basic analysis is 10-15 business days.

Grain Size Analysis: Laser or sieve method; includes tabular data, graphics and statistical sorting in Excel format.

PTS File No: 49143
 Client: PES Environmental, Inc.
 Report Date: 10/25/19

DRY BULK DENSITY OF IN-PLACE SOIL and TOTAL POROSITY (CALCULATED)

(Methodology: ASTM D2937, calculation)

Project Name: American Linen
 Project No: 1413-001-02-501B
 Site Location: Seattle, WA

SAMPLE ID.	PTS ID	DEPTH, ft.	ANALYSIS DATE	TOTAL SAMPLE VOLUME, cc	MOISTURE CONTENT, % wt	VOLUMETRIC WATER CONTENT, fraction Vb	DRY BULK DENSITY, g/cc	TOTAL (1) POROSITY, fraction Vb	VOLUME OF SOLIDS, cc	VOLUME OF VOIDS, cc	VOID RATIO	SATURATION
MW-323-43.5	1	43.65-43.80	20191021	140.23	22.7	0.375	1.65	0.389	85.6	54.6	0.638	0.963
MW-323-32.5	2	32.50-32.70	20191021	142.45	40.8	0.526	1.29	0.528	67.3	75.1	1.117	0.996
MW-323-100	3	100.50-101.00	20191021	454.31	8.9	0.191	2.14	0.206	360.9	93.5	0.259	0.927
MW-303-65	4	65.50-66.0	20191021	455.02	12.3	0.251	2.03	0.251	340.8	114.2	0.335	0.999
MW-303-80	5	80.50-81.00	20191021	458.95	11.1	0.230	2.06	0.240	348.9	110.1	0.315	0.960
MW-308-33	6	33.50-33.70	20191021	143.05	22.7	0.379	1.67	0.380	88.8	54.3	0.612	0.998
MW-308-40	7	40.00-40.50	20191021	463.82	17.5	0.314	1.80	0.332	309.9	153.9	0.496	0.947

(1) Total Porosity by calculated method

Specific gravity used for calculation of total porosity were assumed =2.70

Water = 0.9981 g/cc; Vb = Bulk Volume

PTS File No: 49143
 Client: PES Environmental, Inc.
 Report Date: 10/25/19

Integrated Geosciences Laboratories, LLC

PHYSICAL PROPERTIES DATA

Project Name: American Linen
 COC ID: 1413-001-02-501B
 Project No: Seattle, WA

SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENTATION (1)	MOISTURE CONTENT, % weight	DENSITY		POROSITY, %Vb (2)				
				ASTM D2216		API RP 40		TOTAL	AIR-FILLED	WATER-FILLED
				DRY BULK, g/cc	GRAIN, g/cc					
MW-323-43.5	43.60	V	22.0	1.54	2.70	42.9	9.0	33.9		
MW-323-32.5	32.60	V	44.4	1.15	2.72	57.8	6.8	51.0		
MW-323-100	100.10	V	12.0	1.64	2.69	39.0	19.4	19.6		
MW-303-65	65.10	V	12.7	1.80	2.71	33.7	10.9	22.9		
MW-303-80	80.10	V	14.3	1.80	2.71	33.8	8.0	25.8		
MW-308-33	33.15	V	20.1	1.57	2.69	41.7	10.3	31.4		

(1) Sample Orientation: H = horizontal; V = vertical; R = remold

(2) Total Porosity = all non & interconnected pore channels; Air Filled = pore channels not occupied by pore fluids.

Vb = Bulk Volume, cc.

-- = Analysis not requested.

IGL File No: 49143
 Client: PES Environmental, Inc.
 Report Date: 10/25/19

Integrated Geosciences Laboratories, LLC

PHYSICAL PROPERTIES DATA - HYDRAULIC CONDUCTIVITY

(Methodology: API RP 40; ASTM D5084; EPA 9100)

Project Name: American Linen
 Project No: 1413-001-02-501B
 Project No: Seattle, WA

SAMPLE ID.	PTS ID	DEPTH, ft.	SAMPLE ORIENTATION (1)	ANALYSIS DATE	CONFINING PRESSURE, psi	HYDRAULIC GRADIENT, (Dimensionless)	EFFECTIVE (2,3) PERMEABILITY TO WATER, millidarcy	HYDRAULIC CONDUCTIVITY (2,3), cm/s
MW-323-43.5	1	43.60	V	20191021	25	65	12.131	1.23E-05
						65	12.364	1.25E-05
						65	11.979	1.21E-05
						Average:-	12.158	1.23E-05
MW-323-32.5	2	37.60	V	20191021	25	64	0.180	1.82E-07
						64	0.180	1.82E-07
						64	0.179	1.81E-07
						Average:-	0.180	1.82E-07
MW-323-100	3	100.10	V	20191021	25	26	117.669	1.19E-04
						26	117.585	1.19E-04
						26	117.467	1.19E-04
						Average:-	117.574	1.19E-04
MW-303-65	4	65.10	V	20191021	25	67	0.738	7.35E-07
						67	0.738	7.35E-07
						67	0.670	6.68E-07
						Average:-	0.715	7.13E-07
MW-303-80	5	80.10	V	20191021	25	66	0.215	2.13E-07
						66	0.179	1.77E-07
						66	0.179	1.78E-07
						Average:-	0.191	1.89E-07
MW-308-33	6	33.15	V	20191021	25	27	122.673	1.20E-04
						26	123.708	1.21E-04
						27	123.323	1.21E-04
						Average:-	123.235	1.21E-04

(1) Sample Orientation: H = horizontal; V = vertical; R = remold
 (2) Effective (Native) = With as-received pore fluids in place.
 (3) Permeability to water and hydraulic conductivity measured at saturated conditions.
 Water = filtered Laboratory Fresh (tap) or Site water.

Integrated Geosciences Laboratories

IGL File No: 49143
 Client: PES Environmental, Inc.
 Report Date: 10/25/19

ORGANIC CARBON DATA - TOC (foc)
 (Methodology: Walkley-Black)

Project Name: American Linen
 Project No: 1413-001-02-501B
 Site Location: Seattle, WA

SAMPLE ID.	IGL ID	DEPTH, ft.	ANALYSIS DATE	ANALYSIS TIME	SAMPLE MATRIX	TOTAL ORGANIC CARBON, mg/kg	FRACTION ORGANIC CARBON, g/g
MW-323-43.5	1	43.5-44	20191018	1030	SOIL	1150	1.15E-03
MW-323-32.5	2	32.5-33.5	20191018	1030	SOIL	6850	6.85E-03
MW-323-100	3	100-101	20191018	1030	SOIL	290	2.90E-04
MW-303-65	4	65-66	20191018	1030	SOIL	2650	2.65E-03
MW-303-80	5	80-81	20191018	1030	SOIL	2700	2.70E-03
MW-308-33	6	33-34	20191018	1030	SOIL	300	3.00E-04
MW-308-40	7	40-41	20191018	1030	SOIL	390	3.90E-04
MW-328-70	20	70.00	20191018	1030	SOIL	290	2.90E-04
MW-304-108	23	108.00	20191018	1030	SOIL	210	2.10E-04
MW-311-40	27	40.00	20191018	1030	SOIL	200	2.00E-04

Blank	N/A	20191018	1030	BLANK	ND	ND
SRM D096-542	N/A	20191018	1030	SRM	4150	4.15E-03
				Reporting Limit:	100	1.00E-04

QC DATA

SRM ID/Lot No.	REC (%)	Control Limits	Certified Concentration mg/kg	QC Performance Acceptance Limits, mg/kg	
				Lower	Upper
SRM D096-542	107	75-125	3890	2918	4863

ND = Not Detected

PARTICLE SIZE SUMMARY
 (METHODOLOGY: Sieve + Laser Diffraction Analysis - ASTM D422+4464)

PROJECT NAME: American Linen
 PROJECT NO: 1413-001-02-501B
 SITE LOCATION: Seattle, WA

Report Date: 10/25/2019

Sample ID	IGL ID	Depth, ft.	Median Grain Size Description	Median Grain Size mm	Particle Size Distribution, wt. percent						Silt & Clay
					Gravel	Sand Size			Silt	Clay	
						Coarse	Medium	Fine			
MW-307-44	8	44	Fine sand	0.320	3.35	3.98	23.18	53.65	9.94	5.90	15.84
MW-319-28	9	28	Fine sand	0.195	20.56	5.94	11.65	25.80	23.48	12.56	36.04
MW-316-37	10	37	Fine sand	0.233	5.87	4.06	16.51	50.77	14.18	8.61	22.79
MW-302-33	11	33	Fine sand	0.230	8.87	6.08	15.02	55.76	10.86	3.41	14.27
MW-324-30	12	30	Clay	0.002	0.00	0.03	0.28	14.77	16.65	68.26	84.92
MW-302-60	13	60	Fine sand	0.185	11.53	4.48	12.07	34.47	22.67	14.78	37.44
MW-190-48	14	48	Fine sand	0.128	6.72	4.24	13.73	31.15	28.31	15.84	44.16
MW-316-58	15	58	Fine sand	0.418	16.75	11.20	21.83	25.80	12.89	11.52	24.41
MW-311-48	16	48	Fine sand	0.164	0.00	0.04	0.13	94.07	4.69	1.08	5.77
MW-309-59	17	59	Silt	0.018	6.97	3.29	9.73	10.56	39.62	29.83	69.45
MW-322-32	18	32	Silt	0.028	6.90	5.60	9.75	20.00	20.51	37.24	57.75
MW-329-70	19	70	Fine sand	0.364	0.00	0.37	34.82	63.54	0.76	0.50	1.26
MW-328-70	20	70	Fine sand	0.249	0.00	0.08	4.47	92.00	2.35	1.10	3.45
MW-304-81	21	81	Clay	0.003	0.07	0.03	0.44	0.71	39.32	59.43	98.75

PARTICLE SIZE SUMMARY
 (METHODOLOGY: Sieve + Laser Diffraction Analysis - ASTM D422+4464)

PROJECT NAME: American Linen
 PROJECT NO: 1413-001-02-501B
 SITE LOCATION: Seattle, WA

Report Date: 10/25/2019

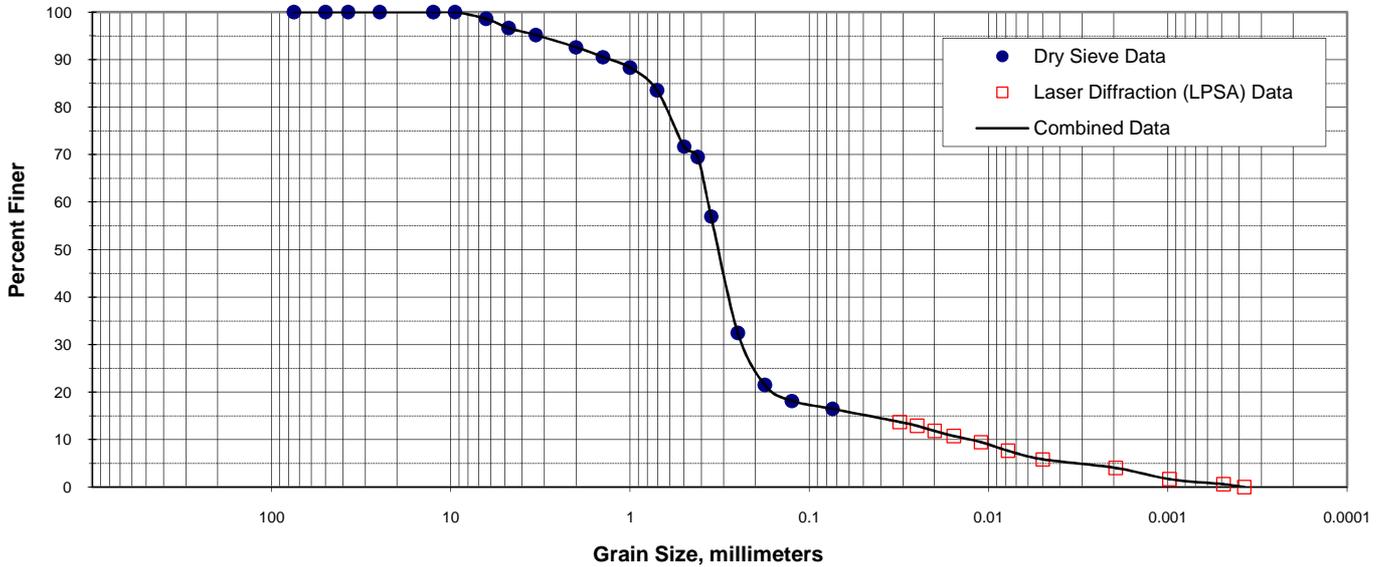
Sample ID	IGL ID	Depth, ft.	Median Grain Size Description	Median Grain Size mm	Particle Size Distribution, wt. percent						Silt & Clay
					Gravel	Sand Size			Silt	Clay	
						Coarse	Medium	Fine			
MW-329-105	22	105	Coarse Sand	2.032	23.45	27.21	15.84	7.07	14.23	12.20	26.43
MW-304-108	23	108	Medium Sand	0.742	8.91	6.56	54.90	27.60	1.03	1.00	2.03
MW-324-38	24	38	Silt	0.020	3.52	2.33	4.47	20.16	43.34	26.18	69.52
MW-314-43	25	43	Fine sand	0.093	1.74	2.31	9.25	39.73	31.31	15.67	46.98
MW-326-39	26	39	Fine sand	0.178	0.12	0.05	3.26	90.38	4.70	1.49	6.19
MW-311-40	27	40	Fine sand	0.124	0.00	0.09	0.14	78.64	18.89	2.25	21.14
MW-328-45	28	45	Fine sand	0.145	0.24	0.54	1.88	60.44	22.80	14.10	36.90

Client: PES Environmental, Inc.,
Project: American Linen
Project No: 1413-001-02-501B

IGL ID:- 8

IGL File No: 49143
Sample ID: MW-307-44
Depth, ft: 44

COMBINED SIEVE + LASER DIFFRACTION DATA



Dry Sieve Data						Laser Diffraction (LPSA) Data					
Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer	Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer
Inches	Millimeters					Inches	Millimeters				
2.95	75.0	-6.23	3"	0.00	100.00	0.250	6.351	-2.67	1/4	0.00	100.00
1.97	50.0	-5.64	2"	0.00	100.00	0.187	4.757	-2.25	4	0.00	100.00
1.48	37.5	-5.23	1-1/2"	0.00	100.00	0.132	3.364	-1.75	6	0.00	100.00
0.984	25.0	-4.64	1	0.00	100.00	0.079	2.000	-1.00	10	0.00	100.00
0.492	12.5	-3.64	1/2	0.00	100.00	0.047	1.189	-0.25	16	0.00	100.00
0.374	9.50	-3.25	3/8	0.00	100.00	0.033	0.841	0.25	20	3.24	96.76
0.250	6.35	-2.67	1/4	1.40	98.60	0.028	0.707	0.50	25	13.26	86.74
0.187	4.76	-2.25	4	3.35	96.65	0.023	0.595	0.75	30	21.02	78.98
0.132	3.36	-1.75	6	4.81	95.19	0.020	0.500	1.00	35	30.17	69.83
0.079	2.00	-1.00	10	7.34	92.66	0.017	0.420	1.25	40	40.29	59.71
0.056	1.414	-0.50	14	9.42	90.58	0.0139	0.3536	1.50	45	50.60	49.40
0.039	1.000	0.00	18	11.69	88.31	0.0117	0.2973	1.75	50	58.87	41.13
0.028	0.707	0.50	25	16.45	83.55	0.0098	0.2500	2.00	60	68.82	31.18
0.020	0.500	1.00	35	28.25	71.75	0.0083	0.2102	2.25	70	75.10	24.90
0.017	0.420	1.25	40	30.51	69.49	0.0070	0.1768	2.50	80	79.06	20.94
0.014	0.354	1.50	45	42.96	57.04	0.0059	0.1487	2.75	100	81.28	18.72
0.010	0.250	2.00	60	67.55	32.45	0.0049	0.1250	3.00	120	82.47	17.53
0.007	0.1768	2.50	80	78.50	21.50	0.0041	0.1051	3.25	140	83.13	16.87
0.005	0.1250	3.00	120	81.80	18.20	0.0035	0.0884	3.50	170	83.63	16.37
0.003	0.0743	3.75	200	83.50	16.50	0.0029	0.0743	3.75	200	84.16	15.84
0.002	0.0526	4.25	270	94.22	5.78	0.0025	0.0625	4.00	230	84.63	15.37
0.001	0.0372	4.75	400	94.23	5.77	0.0021	0.0526	4.25	270	84.92	15.08
			PAN	100	0.00	0.0017	0.0442	4.50	325	85.15	14.85
						0.0015	0.0372	4.75	400	85.56	14.44
						0.0012	0.0313	5.00	450	86.25	13.75
						0.0010	0.0250	5.32	500	87.09	12.91
						0.0008	0.0201	5.64	635	88.16	11.84
						0.0006	0.0156	6.00		89.22	10.78
						0.0004	0.0110	6.50		90.48	9.52
						0.0003	0.0078	7.00		92.34	7.66
						0.0002	0.0050	7.65		94.10	5.90
						0.00008	0.00195	9.00		95.95	4.05
						0.00004	0.00098	10.00		98.32	1.68
						0.00002	0.00049	11.00		99.37	0.63
						0.00001	0.00038	11.38		100.00	0.00

Client: PES Environmental, Inc., **IGL ID:-** 8 **IGL File No:** 49143
Project: American Linen **Sample ID:** MW-307-44
Project No: 1413-001-02-501B **Depth, ft:** 44

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA

(Tabular Data plus Statistics)

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA						
Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1.00	0.0	100.0	0.0
0.492	12.5	-3.64	1/2	0.0	100.0	0.0
0.374	9.50	-3.25	3/8	0.0	100.0	0.0
0.250	6.35	-2.67	1/4	1.4	98.6	1.4
0.1873	4.76	-2.25	4	2.0	96.6	3.4
0.1324	3.364	-1.75	6	1.5	95.2	4.8
0.0787	2.000	-1.00	10	2.5	92.7	7.3
0.0557	1.414	-0.50	14	2.1	90.6	9.4
0.0394	1.000	0.00	18	2.3	88.3	11.7
0.0278	0.707	0.50	25	4.8	83.6	16.4
0.0197	0.500	1.00	35	11.8	71.7	28.3
0.01655	0.420	1.25	40	2.3	69.5	30.5
0.01392	0.354	1.50	45	12.4	57.0	43.0
0.00984	0.2500	2.00	60	24.6	32.5	67.5
0.00696	0.1768	2.50	80	11.0	21.5	78.5
0.00585	0.1487	2.75	100	2.8	18.7	81.3
0.00492	0.1250	3.00	120	1.2	17.5	82.5
0.00414	0.1051	3.25	140	0.7	16.9	83.1
0.00348	0.0884	3.50	170	0.5	16.4	83.6
0.00293	0.0743	3.75	200	0.5	15.8	84.2
0.00246	0.0625	4.00	230	0.5	15.4	84.6
0.00207	0.0526	4.25	270	0.3	15.1	84.9
0.00174	0.0442	4.50	325	0.2	14.9	85.1
0.00146	0.0372	4.75	400	0.4	14.4	85.6
0.00123	0.0313	5.00	450	0.7	13.7	86.3
0.00099	0.0250	5.32	500	0.8	12.9	87.1
0.00079	0.0201	5.64	635	1.1	11.8	88.2
0.00062	0.0156	6.00		1.1	10.8	89.2
0.00043	0.0110	6.50		1.3	9.5	90.5
0.00031	0.0078	7.00		1.9	7.7	92.3
0.00020	0.0050	7.65		1.8	5.9	94.1
0.00008	0.0020	9.00		1.9	4.0	96.0
0.00004	0.0010	10.00		2.4	1.7	98.3
0.00002	0.0005	11.00		1.1	0.6	99.4
0.00001	0.0004	11.38		0.6	0.0	100.0
TOTALS				100.0	100.0	

COMBINED DATA STATISTICS			
Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-1.69	0.1272	3.232
10	-0.37	0.0510	1.295
16	0.45	0.0288	0.731
25	0.86	0.0217	0.550
40	1.44	0.0145	0.368
50	1.64	0.0126	0.320
60	1.85	0.0109	0.278
75	2.34	0.0078	0.197
84	3.68	0.0031	0.078
90	6.31	0.0005	0.013
95	8.30	0.0001	0.003

Measure	Trask	Inman	Folk-Ward
Median, phi	1.64	1.64	1.64
Median, in.	0.0126	0.0126	0.0126
Median, mm	0.320	0.320	0.320
Mean, phi	1.42	2.06	1.92
Mean, in.	0.0147	0.0094	0.0104
Mean, mm	0.374	0.239	0.264
Sorting	1.669	1.611	2.320
Skewness	1.029	0.261	0.297
Kurtosis	0.138	2.101	2.771

Grain Size Description (ASTM-USCS Scale) Fine sand (based on Trask Median)

Description (ASTM-USCS Scale)	Retained on Sieve #	Weight Percent
Gravel	4	3.4
Coarse Sand	10	4.0
Medium Sand	40	23.2
Fine Sand	200	53.6
Silt	>0.005 mm	9.9
Clay	<0.005 mm	5.9
Total		100

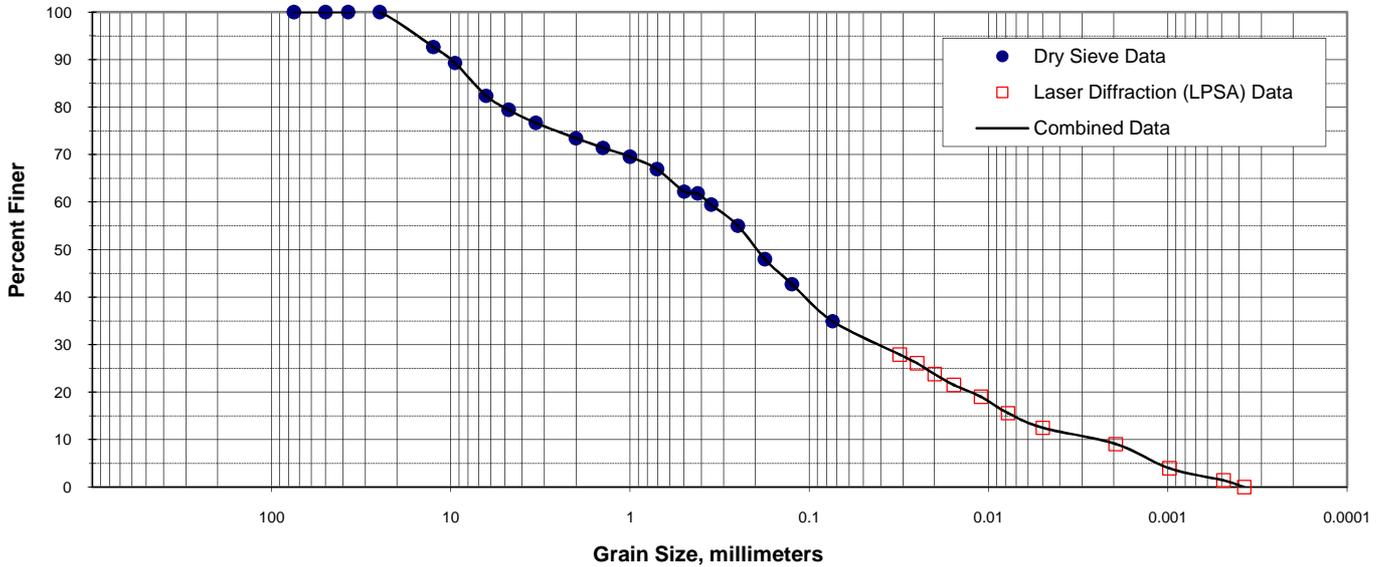
Notes: Dry sieve preparation was drying followed by pass/retained (wash) on 200 sieve.

Client: PES Environmental, Inc.,
Project: American Linen
Project No: 1413-001-02-501B

IGL ID:- 9

IGL File No: 49143
Sample ID: MW-319-28
Depth, ft: 28

COMBINED SIEVE + LASER DIFFRACTION DATA



Dry Sieve Data						Laser Diffraction (LPSA) Data					
Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer	Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer
Inches	Millimeters					Inches	Millimeters				
2.95	75.0	-6.23	3"	0.00	100.00	0.250	6.351	-2.67	1/4	0.00	100.00
1.97	50.0	-5.64	2"	0.00	100.00	0.187	4.757	-2.25	4	0.00	100.00
1.48	37.5	-5.23	1-1/2"	0.00	100.00	0.132	3.364	-1.75	6	0.00	100.00
0.984	25.0	-4.64	1	0.00	100.00	0.079	2.000	-1.00	10	0.00	100.00
0.492	12.5	-3.64	1/2	7.27	92.73	0.047	1.189	-0.25	16	0.00	100.00
0.374	9.50	-3.25	3/8	10.63	89.37	0.033	0.841	0.25	20	0.73	99.27
0.250	6.35	-2.67	1/4	17.56	82.44	0.028	0.707	0.50	25	5.81	94.19
0.187	4.76	-2.25	4	20.56	79.44	0.023	0.595	0.75	30	10.19	89.81
0.132	3.36	-1.75	6	23.29	76.71	0.020	0.500	1.00	35	15.68	84.32
0.079	2.00	-1.00	10	26.50	73.50	0.017	0.420	1.25	40	22.23	77.77
0.056	1.414	-0.50	14	28.51	71.49	0.0139	0.3536	1.50	45	29.59	70.41
0.039	1.000	0.00	18	30.42	69.58	0.0117	0.2973	1.75	50	35.96	64.04
0.028	0.707	0.50	25	33.03	66.97	0.0098	0.2500	2.00	60	44.09	55.91
0.020	0.500	1.00	35	37.72	62.28	0.0083	0.2102	2.25	70	49.64	50.36
0.017	0.420	1.25	40	38.16	61.84	0.0070	0.1768	2.50	80	53.76	46.24
0.014	0.354	1.50	45	40.50	59.50	0.0059	0.1487	2.75	100	56.75	43.25
0.010	0.250	2.00	60	44.90	55.10	0.0049	0.1250	3.00	120	58.99	41.01
0.007	0.1768	2.50	80	52.00	48.00	0.0041	0.1051	3.25	140	60.77	39.23
0.005	0.1250	3.00	120	57.20	42.80	0.0035	0.0884	3.50	170	62.38	37.62
0.003	0.0743	3.75	200	65.00	35.00	0.0029	0.0743	3.75	200	63.96	36.04
0.002	0.0526	4.25	270	76.88	23.12	0.0025	0.0625	4.00	230	65.52	34.48
0.001	0.0372	4.75	400	76.88	23.12	0.0021	0.0526	4.25	270	67.04	32.96
			PAN	100	0.00	0.0017	0.0442	4.50	325	68.60	31.40
						0.0015	0.0372	4.75	400	70.30	29.70
						0.0012	0.0313	5.00	450	72.10	27.90
						0.0010	0.0250	5.32	500	73.92	26.08
						0.0008	0.0201	5.64	635	76.19	23.81
						0.0006	0.0156	6.00		78.46	21.54
						0.0004	0.0110	6.50		80.98	19.02
						0.0003	0.0078	7.00		84.35	15.65
						0.0002	0.0050	7.65		87.44	12.56
						0.00008	0.00195	9.00		90.87	9.13
						0.00004	0.00098	10.00		96.03	3.97
						0.00002	0.00049	11.00		98.57	1.43
						0.00001	0.00038	11.38		100.00	0.00

Client: PES Environmental, Inc., **IGL ID:-** 9 **IGL File No:** 49143
Project: American Linen **Sample ID:** MW-319-28
Project No: 1413-001-02-501B **Depth, ft:** 28

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA
 (Tabular Data plus Statistics)

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA						
Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1.00	0.0	100.0	0.0
0.492	12.5	-3.64	1/2	7.3	92.7	7.3
0.374	9.50	-3.25	3/8	3.4	89.4	10.6
0.250	6.35	-2.67	1/4	6.9	82.4	17.6
0.1873	4.76	-2.25	4	3.0	79.4	20.6
0.1324	3.364	-1.75	6	2.7	76.7	23.3
0.0787	2.000	-1.00	10	3.2	73.5	26.5
0.0557	1.414	-0.50	14	2.0	71.5	28.5
0.0394	1.000	0.00	18	1.9	69.6	30.4
0.0278	0.707	0.50	25	2.6	67.0	33.0
0.0197	0.500	1.00	35	4.7	62.3	37.7
0.01655	0.420	1.25	40	0.4	61.8	38.2
0.01392	0.354	1.50	45	2.3	59.5	40.5
0.00984	0.2500	2.00	60	4.4	55.1	44.9
0.00696	0.1768	2.50	80	7.1	48.0	52.0
0.00585	0.1487	2.75	100	4.8	43.2	56.8
0.00492	0.1250	3.00	120	2.2	41.0	59.0
0.00414	0.1051	3.25	140	1.8	39.2	60.8
0.00348	0.0884	3.50	170	1.6	37.6	62.4
0.00293	0.0743	3.75	200	1.6	36.0	64.0
0.00246	0.0625	4.00	230	1.6	34.5	65.5
0.00207	0.0526	4.25	270	1.5	33.0	67.0
0.00174	0.0442	4.50	325	1.6	31.4	68.6
0.00146	0.0372	4.75	400	1.7	29.7	70.3
0.00123	0.0313	5.00	450	1.8	27.9	72.1
0.00099	0.0250	5.32	500	1.8	26.1	73.9
0.00079	0.0201	5.64	635	2.3	23.8	76.2
0.00062	0.0156	6.00		2.3	21.5	78.5
0.00043	0.0110	6.50		2.5	19.0	81.0
0.00031	0.0078	7.00		3.4	15.7	84.3
0.00020	0.0050	7.65		3.1	12.6	87.4
0.00008	0.0020	9.00		3.4	9.1	90.9
0.00004	0.0010	10.00		5.2	4.0	96.0
0.00002	0.0005	11.00		2.5	1.4	98.6
0.00001	0.0004	11.38		1.4	0.0	100.0
TOTALS				100.0	100.0	100.0

COMBINED DATA STATISTICS			
Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-3.96	0.6111	15.521
10	-3.32	0.3938	10.002
16	-2.80	0.2738	6.954
25	-1.35	0.1004	2.551
40	1.45	0.0144	0.367
50	2.36	0.0077	0.195
60	3.14	0.0045	0.113
75	5.47	0.0009	0.023
84	6.95	0.0003	0.008
90	8.66	0.0001	0.002
95	9.80	0.0000	0.001

Measure	Trask	Inman	Folk-Ward
Median, phi	2.36	2.36	2.36
Median, in.	0.0077	0.0077	0.0077
Median, mm	0.195	0.195	0.195
Mean, phi	-0.36	2.08	2.17
Mean, in.	0.0507	0.0093	0.0087
Mean, mm	1.287	0.237	0.222
Sorting	10.643	4.873	4.521
Skewness	1.230	-0.058	0.012
Kurtosis	0.126	0.411	0.826
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Trask Median)		

Description (ASTM-USCS Scale)	Retained on Sieve #	Weight Percent
Gravel	4	20.6
Coarse Sand	10	5.9
Medium Sand	40	11.7
Fine Sand	200	25.8
Silt	>0.005 mm	23.5
Clay	<0.005 mm	12.6
Total		100

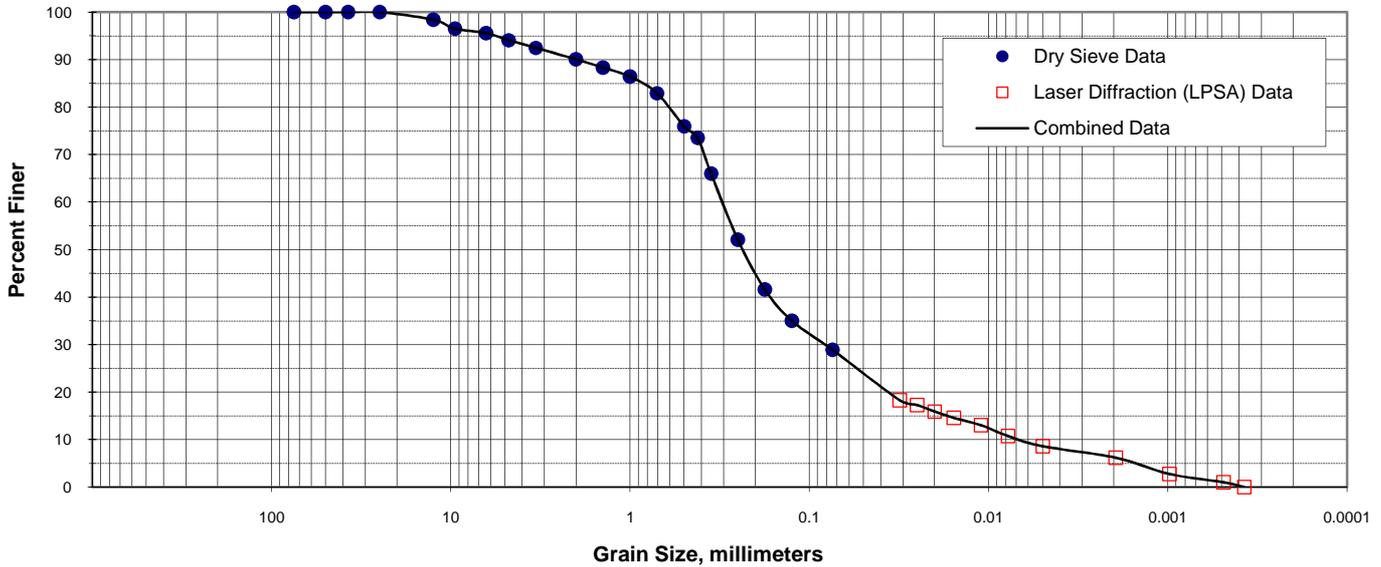
Notes: Dry sieve preparation was drying followed by pass/retained (wash) on 200 sieve.

Client: PES Environmental, Inc.,
Project: American Linen
Project No: 1413-001-02-501B

IGL ID:- 10

IGL File No: 49143
Sample ID: MW-316-37
Depth, ft: 37

COMBINED SIEVE + LASER DIFFRACTION DATA



Dry Sieve Data						Laser Diffraction (LPSA) Data					
Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer	Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer
Inches	Millimeters					Inches	Millimeters				
2.95	75.0	-6.23	3"	0.00	100.00	0.250	6.351	-2.67	1/4	0.00	100.00
1.97	50.0	-5.64	2"	0.00	100.00	0.187	4.757	-2.25	4	0.00	100.00
1.48	37.5	-5.23	1-1/2"	0.00	100.00	0.132	3.364	-1.75	6	0.00	100.00
0.984	25.0	-4.64	1	0.00	100.00	0.079	2.000	-1.00	10	0.00	100.00
0.492	12.5	-3.64	1/2	1.61	98.39	0.047	1.189	-0.25	16	0.00	100.00
0.374	9.50	-3.25	3/8	3.46	96.54	0.033	0.841	0.25	20	11.61	88.39
0.250	6.35	-2.67	1/4	4.42	95.58	0.028	0.707	0.50	25	21.01	78.99
0.187	4.76	-2.25	4	5.87	94.13	0.023	0.595	0.75	30	27.87	72.13
0.132	3.36	-1.75	6	7.46	92.54	0.020	0.500	1.00	35	35.80	64.20
0.079	2.00	-1.00	10	9.93	90.07	0.017	0.420	1.25	40	44.06	55.94
0.056	1.414	-0.50	14	11.65	88.35	0.0139	0.3536	1.50	45	51.82	48.18
0.039	1.000	0.00	18	13.57	86.43	0.0117	0.2973	1.75	50	57.48	42.52
0.028	0.707	0.50	25	17.03	82.97	0.0098	0.2500	2.00	60	63.75	36.25
0.020	0.500	1.00	35	24.02	75.98	0.0083	0.2102	2.25	70	67.70	32.30
0.017	0.420	1.25	40	26.44	73.56	0.0070	0.1768	2.50	80	70.56	29.44
0.014	0.354	1.50	45	33.98	66.02	0.0059	0.1487	2.75	100	72.64	27.36
0.010	0.250	2.00	60	47.92	52.08	0.0049	0.1250	3.00	120	74.16	25.84
0.007	0.1768	2.50	80	58.36	41.64	0.0041	0.1051	3.25	140	75.33	24.67
0.005	0.1250	3.00	120	64.99	35.01	0.0035	0.0884	3.50	170	76.31	23.69
0.003	0.0743	3.75	200	71.07	28.93	0.0029	0.0743	3.75	200	77.21	22.79
0.002	0.0526	4.25	270	71.27	28.73	0.0025	0.0625	4.00	230	78.06	21.94
0.001	0.0372	4.75	400	71.27	28.73	0.0021	0.0526	4.25	270	78.91	21.09
			PAN	100	0.00	0.0017	0.0442	4.50	325	79.78	20.22
						0.0015	0.0372	4.75	400	80.71	19.29
						0.0012	0.0313	5.00	450	81.69	18.31
						0.0010	0.0250	5.32	500	82.70	17.30
						0.0008	0.0201	5.64	635	84.02	15.98
						0.0006	0.0156	6.00		85.39	14.61
						0.0004	0.0110	6.50		86.95	13.05
						0.0003	0.0078	7.00		89.21	10.79
						0.0002	0.0050	7.65		91.39	8.61
						0.00008	0.00195	9.00		93.80	6.20
						0.00004	0.00098	10.00		97.24	2.76
						0.00002	0.00049	11.00		98.96	1.04
						0.00001	0.00038	11.38		100.00	0.00

Client: PES Environmental, Inc., IGL ID:- 10 IGL File No: 49143
 Project: American Linen Sample ID: MW-316-37
 Project No: 1413-001-02-501B Depth, ft: 37

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA
 (Tabular Data plus Statistics)

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA						
Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1.00	0.0	100.0	0.0
0.492	12.5	-3.64	1/2	1.6	98.4	1.6
0.374	9.50	-3.25	3/8	1.9	96.5	3.5
0.250	6.35	-2.67	1/4	1.0	95.6	4.4
0.1873	4.76	-2.25	4	1.4	94.1	5.9
0.1324	3.364	-1.75	6	1.6	92.5	7.5
0.0787	2.000	-1.00	10	2.5	90.1	9.9
0.0557	1.414	-0.50	14	1.7	88.3	11.7
0.0394	1.000	0.00	18	1.9	86.4	13.6
0.0278	0.707	0.50	25	3.5	83.0	17.0
0.0197	0.500	1.00	35	7.0	76.0	24.0
0.01655	0.420	1.25	40	2.4	73.6	26.4
0.01392	0.354	1.50	45	7.5	66.0	34.0
0.00984	0.2500	2.00	60	13.9	52.1	47.9
0.00696	0.1768	2.50	80	10.4	41.6	58.4
0.00585	0.1487	2.75	100	14.3	27.4	72.6
0.00492	0.1250	3.00	120	1.5	25.8	74.2
0.00414	0.1051	3.25	140	1.2	24.7	75.3
0.00348	0.0884	3.50	170	1.0	23.7	76.3
0.00293	0.0743	3.75	200	0.9	22.8	77.2
0.00246	0.0625	4.00	230	0.9	21.9	78.1
0.00207	0.0526	4.25	270	0.8	21.1	78.9
0.00174	0.0442	4.50	325	0.9	20.2	79.8
0.00146	0.0372	4.75	400	0.9	19.3	80.7
0.00123	0.0313	5.00	450	1.0	18.3	81.7
0.00099	0.0250	5.32	500	1.0	17.3	82.7
0.00079	0.0201	5.64	635	1.3	16.0	84.0
0.00062	0.0156	6.00		1.4	14.6	85.4
0.00043	0.0110	6.50		1.6	13.0	87.0
0.00031	0.0078	7.00		2.3	10.8	89.2
0.00020	0.0050	7.65		2.2	8.6	91.4
0.00008	0.0020	9.00		2.4	6.2	93.8
0.00004	0.0010	10.00		3.4	2.8	97.2
0.00002	0.0005	11.00		1.7	1.0	99.0
0.00001	0.0004	11.38		1.0	0.0	100.0
TOTALS				100.0		100.0

COMBINED DATA STATISTICS			
Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-2.50	0.2229	5.661
10	-0.98	0.0776	1.972
16	0.35	0.0309	0.784
25	1.10	0.0184	0.466
40	1.72	0.0120	0.304
50	2.10	0.0092	0.233
60	2.53	0.0068	0.173
75	3.18	0.0043	0.110
84	5.64	0.0008	0.020
90	7.23	0.0003	0.007
95	9.35	0.0001	0.002

Measure	Trask	Inman	Folk-Ward
Median, phi	2.10	2.10	2.10
Median, in.	0.0092	0.0092	0.0092
Median, mm	0.233	0.233	0.233
Mean, phi	1.79	2.99	2.70
Mean, in.	0.0113	0.0049	0.0061
Mean, mm	0.288	0.126	0.154
Sorting	2.055	2.642	3.117
Skewness	0.972	0.338	0.281
Kurtosis	0.090	1.243	2.338
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Trask Median)		

Description (ASTM-USCS Scale)	Retained on Sieve #	Weight Percent
Gravel	4	5.9
Coarse Sand	10	4.1
Medium Sand	40	16.5
Fine Sand	200	50.8
Silt	>0.005 mm	14.2
Clay	<0.005 mm	8.6
Total		100

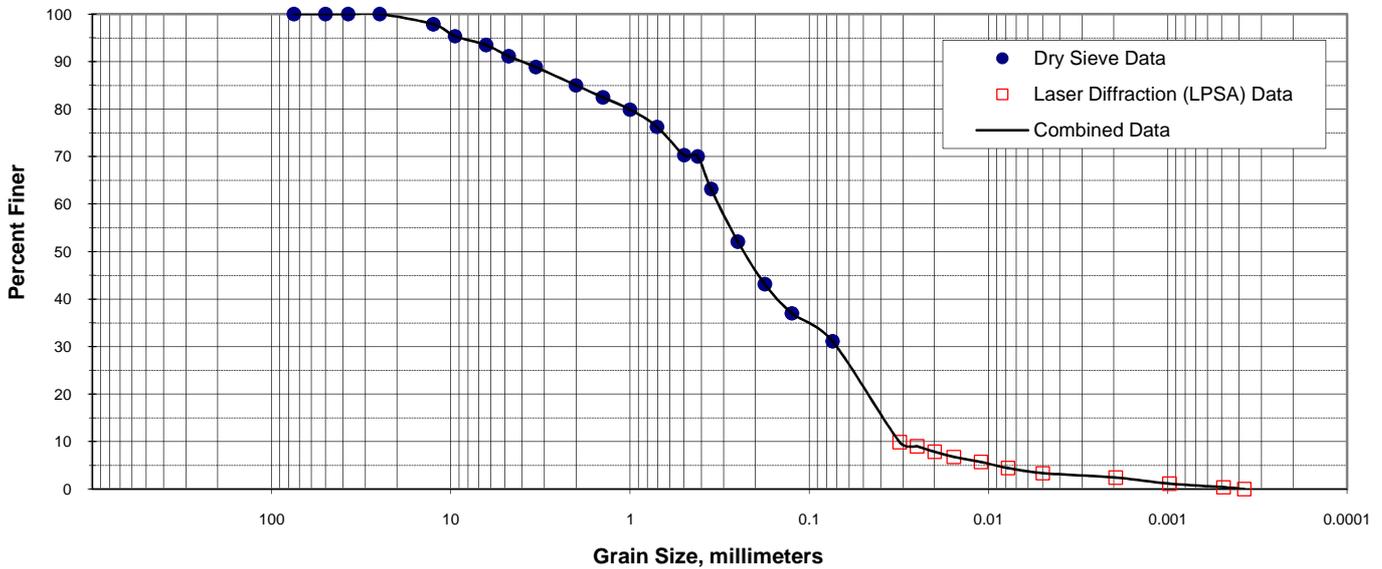
Notes: Dry sieve preparation was drying followed by pass/retained (wash) on 200 sieve.

Client: PES Environmental, Inc.,
Project: American Linen
Project No: 1413-001-02-501B

IGL ID:- 11

IGL File No: 49143
Sample ID: MW-302-33
Depth, ft: 33

COMBINED SIEVE + LASER DIFFRACTION DATA



Dry Sieve Data						Laser Diffraction (LPSA) Data					
Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer	Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer
Inches	Millimeters					Inches	Millimeters				
2.95	75.0	-6.23	3"	0.00	100.00	0.250	6.351	-2.67	1/4	0.00	100.00
1.97	50.0	-5.64	2"	0.00	100.00	0.187	4.757	-2.25	4	0.00	100.00
1.48	37.5	-5.23	1-1/2"	0.00	100.00	0.132	3.364	-1.75	6	0.00	100.00
0.984	25.0	-4.64	1	0.00	100.00	0.079	2.000	-1.00	10	0.00	100.00
0.492	12.5	-3.64	1/2	2.12	97.88	0.047	1.189	-0.25	16	0.00	100.00
0.374	9.50	-3.25	3/8	4.59	95.41	0.033	0.841	0.25	20	22.22	77.78
0.250	6.35	-2.67	1/4	6.50	93.50	0.028	0.707	0.50	25	35.53	64.47
0.187	4.76	-2.25	4	8.87	91.13	0.023	0.595	0.75	30	41.95	58.05
0.132	3.36	-1.75	6	11.14	88.86	0.020	0.500	1.00	35	48.38	51.62
0.079	2.00	-1.00	10	14.94	85.06	0.017	0.420	1.25	40	54.83	45.17
0.056	1.414	-0.50	14	17.51	82.49	0.0139	0.3536	1.50	45	61.07	38.93
0.039	1.000	0.00	18	20.03	79.97	0.0117	0.2973	1.75	50	65.86	34.14
0.028	0.707	0.50	25	23.67	76.33	0.0098	0.2500	2.00	60	71.54	28.46
0.020	0.500	1.00	35	29.67	70.33	0.0083	0.2102	2.25	70	75.36	24.64
0.017	0.420	1.25	40	29.97	70.03	0.0070	0.1768	2.50	80	78.28	21.72
0.014	0.354	1.50	45	36.82	63.18	0.0059	0.1487	2.75	100	80.50	19.50
0.010	0.250	2.00	60	47.88	52.12	0.0049	0.1250	3.00	120	82.24	17.76
0.007	0.1768	2.50	80	56.85	43.15	0.0041	0.1051	3.25	140	83.62	16.38
0.005	0.1250	3.00	120	62.92	37.08	0.0035	0.0884	3.50	170	84.75	15.25
0.003	0.0743	3.75	200	68.88	31.12	0.0029	0.0743	3.75	200	85.73	14.27
0.002	0.0526	4.25	270	69.36	30.64	0.0025	0.0625	4.00	230	86.64	13.36
0.001	0.0372	4.75	400	69.38	30.62	0.0021	0.0526	4.25	270	87.51	12.49
			PAN	100	0.00	0.0017	0.0442	4.50	325	88.36	11.64
						0.0015	0.0372	4.75	400	89.22	10.78
						0.0012	0.0313	5.00	450	90.10	9.90
						0.0010	0.0250	5.32	500	90.99	9.01
						0.0008	0.0201	5.64	635	92.11	7.89
						0.0006	0.0156	6.00		93.17	6.83
						0.0004	0.0110	6.50		94.26	5.74
						0.0003	0.0078	7.00		95.56	4.44
						0.0002	0.0050	7.65		96.59	3.41
						0.00008	0.00195	9.00		97.57	2.43
						0.00004	0.00098	10.00		98.84	1.16
						0.00002	0.00049	11.00		99.55	0.45
						0.00001	0.00038	11.38		100.00	0.00

Client: PES Environmental, Inc., IGL ID:- 11 IGL File No: 49143
 Project: American Linen Sample ID: MW-302-33
 Project No: 1413-001-02-501B Depth, ft: 33

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA

(Tabular Data plus Statistics)

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA						
Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1.00	0.0	100.0	0.0
0.492	12.5	-3.64	1/2	2.1	97.9	2.1
0.374	9.50	-3.25	3/8	2.5	95.4	4.6
0.250	6.35	-2.67	1/4	1.9	93.5	6.5
0.1873	4.76	-2.25	4	2.4	91.1	8.9
0.1324	3.364	-1.75	6	2.3	88.9	11.1
0.0787	2.000	-1.00	10	3.8	85.1	14.9
0.0557	1.414	-0.50	14	2.6	82.5	17.5
0.0394	1.000	0.00	18	2.5	80.0	20.0
0.0278	0.707	0.50	25	3.6	76.3	23.7
0.0197	0.500	1.00	35	6.0	70.3	29.7
0.01655	0.420	1.25	40	0.3	70.0	30.0
0.01392	0.354	1.50	45	6.8	63.2	36.8
0.00984	0.2500	2.00	60	11.1	52.1	47.9
0.00696	0.1768	2.50	80	9.0	43.2	56.8
0.00585	0.1487	2.75	100	23.7	19.5	80.5
0.00492	0.1250	3.00	120	1.7	17.8	82.2
0.00414	0.1051	3.25	140	1.4	16.4	83.6
0.00348	0.0884	3.50	170	1.1	15.3	84.7
0.00293	0.0743	3.75	200	1.0	14.3	85.7
0.00246	0.0625	4.00	230	0.9	13.4	86.6
0.00207	0.0526	4.25	270	0.9	12.5	87.5
0.00174	0.0442	4.50	325	0.9	11.6	88.4
0.00146	0.0372	4.75	400	0.9	10.8	89.2
0.00123	0.0313	5.00	450	0.9	9.9	90.1
0.00099	0.0250	5.32	500	0.9	9.0	91.0
0.00079	0.0201	5.64	635	1.1	7.9	92.1
0.00062	0.0156	6.00		1.1	6.8	93.2
0.00043	0.0110	6.50		1.1	5.7	94.3
0.00031	0.0078	7.00		1.3	4.4	95.6
0.00020	0.0050	7.65		1.0	3.4	96.6
0.00008	0.0020	9.00		1.0	2.4	97.6
0.00004	0.0010	10.00		1.3	1.2	98.8
0.00002	0.0005	11.00		0.7	0.5	99.5
0.00001	0.0004	11.38		0.5	0.0	100.0
TOTALS				100.0	100.0	

COMBINED DATA STATISTICS			
Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-3.12	0.3430	8.713
10	-2.00	0.1575	4.001
16	-0.79	0.0683	1.734
25	0.61	0.0258	0.655
40	1.64	0.0126	0.320
50	2.12	0.0091	0.230
60	2.53	0.0068	0.173
75	2.69	0.0061	0.155
84	3.33	0.0039	0.099
90	4.97	0.0013	0.032
95	6.79	0.0004	0.009

Measure	Trask	Inman	Folk-Ward
Median, phi	2.12	2.12	2.12
Median, in.	0.0091	0.0091	0.0091
Median, mm	0.230	0.230	0.230
Mean, phi	1.30	1.27	1.55
Mean, in.	0.0159	0.0163	0.0134
Mean, mm	0.405	0.415	0.341
Sorting	2.057	2.064	2.534
Skewness	1.382	-0.411	-0.234
Kurtosis	0.063	1.400	1.952

Grain Size Description Fine sand
 (ASTM-USCS Scale) (based on Trask Median)

Description (ASTM-USCS Scale)	Retained on Sieve #	Weight Percent
Gravel	4	8.9
Coarse Sand	10	6.1
Medium Sand	40	15.0
Fine Sand	200	55.8
Silt	>0.005 mm	10.9
Clay	<0.005 mm	3.4
Total		100

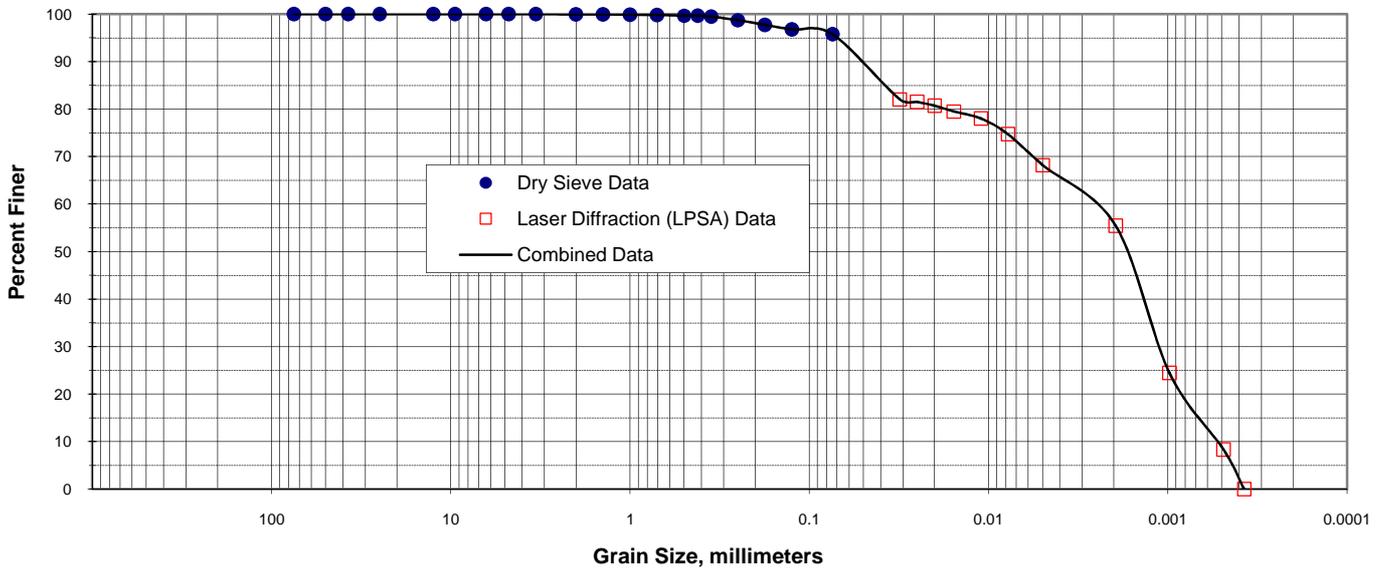
Notes: Dry sieve preparation was drying followed by pass/retained (wash) on 200 sieve.

Client: PES Environmental, Inc.,
Project: American Linen
Project No: 1413-001-02-501B

IGL ID:- 12

IGL File No: 49143
Sample ID: MW-324-30
Depth, ft: 30

COMBINED SIEVE + LASER DIFFRACTION DATA



Dry Sieve Data						Laser Diffraction (LPSA) Data					
Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer	Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer
Inches	Millimeters					Inches	Millimeters				
2.95	75.0	-6.23	3"	0.00	100.00	0.250	6.351	-2.67	1/4	0.00	100.00
1.97	50.0	-5.64	2"	0.00	100.00	0.187	4.757	-2.25	4	0.00	100.00
1.48	37.5	-5.23	1-1/2"	0.00	100.00	0.132	3.364	-1.75	6	0.00	100.00
0.984	25.0	-4.64	1	0.00	100.00	0.079	2.000	-1.00	10	0.00	100.00
0.492	12.5	-3.64	1/2	0.00	100.00	0.047	1.189	-0.25	16	0.00	100.00
0.374	9.50	-3.25	3/8	0.00	100.00	0.033	0.841	0.25	20	0.00	100.00
0.250	6.35	-2.67	1/4	0.00	100.00	0.028	0.707	0.50	25	0.00	100.00
0.187	4.76	-2.25	4	0.00	100.00	0.023	0.595	0.75	30	0.00	100.00
0.132	3.36	-1.75	6	0.00	100.00	0.020	0.500	1.00	35	0.00	100.00
0.079	2.00	-1.00	10	0.03	99.97	0.017	0.420	1.25	40	0.00	100.00
0.056	1.414	-0.50	14	0.06	99.94	0.0139	0.3536	1.50	45	0.00	100.00
0.039	1.000	0.00	18	0.11	99.89	0.0117	0.2973	1.75	50	0.01	99.99
0.028	0.707	0.50	25	0.18	99.82	0.0098	0.2500	2.00	60	0.65	99.35
0.020	0.500	1.00	35	0.29	99.71	0.0083	0.2102	2.25	70	3.28	96.72
0.017	0.420	1.25	40	0.31	99.69	0.0070	0.1768	2.50	80	7.44	92.56
0.014	0.354	1.50	45	0.53	99.47	0.0059	0.1487	2.75	100	10.65	89.35
0.010	0.250	2.00	60	1.22	98.78	0.0049	0.1250	3.00	120	12.11	87.89
0.007	0.1768	2.50	80	2.25	97.75	0.0041	0.1051	3.25	140	13.06	86.94
0.005	0.1250	3.00	120	3.20	96.80	0.0035	0.0884	3.50	170	14.10	85.90
0.003	0.0743	3.75	200	4.21	95.79	0.0029	0.0743	3.75	200	15.08	84.92
0.002	0.0526	4.25	270	4.32	95.68	0.0025	0.0625	4.00	230	15.80	84.20
0.001	0.0372	4.75	400	4.38	95.62	0.0021	0.0526	4.25	270	16.33	83.67
			PAN	100	0.00	0.0017	0.0442	4.50	325	16.82	83.18
						0.0015	0.0372	4.75	400	17.34	82.66
						0.0012	0.0313	5.00	450	17.89	82.11
						0.0010	0.0250	5.32	500	18.44	81.56
						0.0008	0.0201	5.64	635	19.29	80.71
						0.0006	0.0156	6.00		20.45	79.55
						0.0004	0.0110	6.50		21.97	78.03
						0.0003	0.0078	7.00		25.27	74.73
						0.0002	0.0050	7.65		31.74	68.26
						0.00008	0.00195	9.00		44.55	55.45
						0.00004	0.00098	10.00		75.51	24.49
						0.00002	0.00049	11.00		91.65	8.35
						0.00001	0.00038	11.38		100.00	0.00

Client: PES Environmental, Inc., IGL ID:- 12 IGL File No: 49143
 Project: American Linen Sample ID: MW-324-30
 Project No: 1413-001-02-501B Depth, ft: 30

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA

(Tabular Data plus Statistics)

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA						
Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1.00	0.0	100.0	0.0
0.492	12.5	-3.64	1/2	0.0	100.0	0.0
0.374	9.50	-3.25	3/8	0.0	100.0	0.0
0.250	6.35	-2.67	1/4	0.0	100.0	0.0
0.1873	4.76	-2.25	4	0.0	100.0	0.0
0.1324	3.364	-1.75	6	0.0	100.0	0.0
0.0787	2.000	-1.00	10	0.0	100.0	0.0
0.0557	1.414	-0.50	14	0.0	99.9	0.1
0.0394	1.000	0.00	18	0.0	99.9	0.1
0.0278	0.707	0.50	25	0.1	99.8	0.2
0.0197	0.500	1.00	35	0.1	99.7	0.3
0.01655	0.420	1.25	40	0.0	99.7	0.3
0.01392	0.354	1.50	45	0.2	99.5	0.5
0.00984	0.2500	2.00	60	0.7	98.8	1.2
0.00696	0.1768	2.50	80	1.0	97.7	2.3
0.00585	0.1487	2.75	100	8.4	89.4	10.6
0.00492	0.1250	3.00	120	1.5	87.9	12.1
0.00414	0.1051	3.25	140	0.9	86.9	13.1
0.00348	0.0884	3.50	170	1.0	85.9	14.1
0.00293	0.0743	3.75	200	1.0	84.9	15.1
0.00246	0.0625	4.00	230	0.7	84.2	15.8
0.00207	0.0526	4.25	270	0.5	83.7	16.3
0.00174	0.0442	4.50	325	0.5	83.2	16.8
0.00146	0.0372	4.75	400	0.5	82.7	17.3
0.00123	0.0313	5.00	450	0.5	82.1	17.9
0.00099	0.0250	5.32	500	0.6	81.6	18.4
0.00079	0.0201	5.64	635	0.8	80.7	19.3
0.00062	0.0156	6.00		1.2	79.6	20.4
0.00043	0.0110	6.50		1.5	78.0	22.0
0.00031	0.0078	7.00		3.3	74.7	25.3
0.00020	0.0050	7.65		6.5	68.3	31.7
0.00008	0.0020	9.00		12.8	55.5	44.5
0.00004	0.0010	10.00		31.0	24.5	75.5
0.00002	0.0005	11.00		16.1	8.4	91.6
0.00001	0.0004	11.38		8.4	0.0	100.0
TOTALS				100.0	100.0	

COMBINED DATA STATISTICS			
Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	2.58	0.0066	0.167
10	2.73	0.0059	0.151
16	4.09	0.0023	0.059
25	6.96	0.0003	0.008
40	8.52	0.0001	0.003
50	9.18	0.0001	0.002
60	9.50	0.0001	0.001
75	9.98	0.0000	0.001
84	10.53	0.0000	0.001
90	10.90	0.0000	0.001
95	11.15	0.0000	0.000

Measure	Trask	Inman	Folk-Ward
Median, phi	9.18	9.18	9.18
Median, in.	0.0001	0.0001	0.0001
Median, mm	0.002	0.002	0.002
Mean, phi	7.79	7.31	7.93
Mean, in.	0.0002	0.0002	0.0002
Mean, mm	0.005	0.006	0.004
Sorting	2.853	3.216	2.907
Skewness	1.630	-0.580	-0.560
Kurtosis	0.023	0.332	1.161
Grain Size Description (ASTM-USCS Scale)	Clay (based on Trask Median)		

Description (ASTM-USCS Scale)	Retained on Sieve #	Weight Percent
Gravel	4	0.0
Coarse Sand	10	0.0
Medium Sand	40	0.3
Fine Sand	200	14.8
Silt	>0.005 mm	16.7
Clay	<0.005 mm	68.3
Total		100

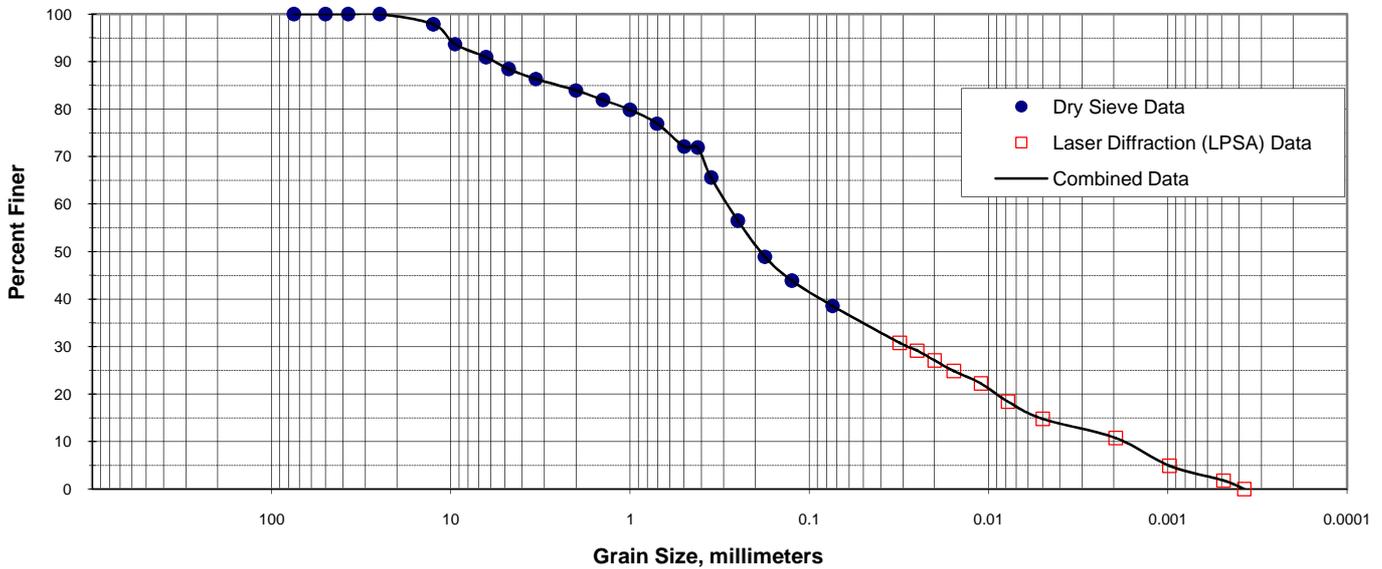
Notes: Dry sieve preparation was drying followed by pass/retained (wash) on 200 sieve.

Client: PES Environmental, Inc.,
Project: American Linen
Project No: 1413-001-02-501B

IGL ID:- 13

IGL File No: 49143
Sample ID: MW-302-60
Depth, ft: 60

COMBINED SIEVE + LASER DIFFRACTION DATA



Dry Sieve Data						Laser Diffraction (LPSA) Data					
Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer	Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer
Inches	Millimeters					Inches	Millimeters				
2.95	75.0	-6.23	3"	0.00	100.00	0.250	6.351	-2.67	1/4	0.00	100.00
1.97	50.0	-5.64	2"	0.00	100.00	0.187	4.757	-2.25	4	0.00	100.00
1.48	37.5	-5.23	1-1/2"	0.00	100.00	0.132	3.364	-1.75	6	0.00	100.00
0.984	25.0	-4.64	1	0.00	100.00	0.079	2.000	-1.00	10	0.00	100.00
0.492	12.5	-3.64	1/2	2.13	97.87	0.047	1.189	-0.25	16	0.00	100.00
0.374	9.50	-3.25	3/8	6.26	93.74	0.033	0.841	0.25	20	1.46	98.54
0.250	6.35	-2.67	1/4	9.05	90.95	0.028	0.707	0.50	25	9.14	90.86
0.187	4.76	-2.25	4	11.53	88.47	0.023	0.595	0.75	30	14.08	85.92
0.132	3.36	-1.75	6	13.60	86.40	0.020	0.500	1.00	35	19.56	80.44
0.079	2.00	-1.00	10	16.01	83.99	0.017	0.420	1.25	40	25.49	74.51
0.056	1.414	-0.50	14	18.06	81.94	0.0139	0.3536	1.50	45	31.58	68.42
0.039	1.000	0.00	18	20.14	79.86	0.0117	0.2973	1.75	50	36.65	63.35
0.028	0.707	0.50	25	23.00	77.00	0.0098	0.2500	2.00	60	43.30	56.70
0.020	0.500	1.00	35	27.87	72.13	0.0083	0.2102	2.25	70	48.21	51.79
0.017	0.420	1.25	40	28.08	71.92	0.0070	0.1768	2.50	80	52.00	47.91
0.014	0.354	1.50	45	34.41	65.59	0.0059	0.1487	2.75	100	55.08	44.92
0.010	0.250	2.00	60	43.48	56.52	0.0049	0.1250	3.00	120	57.49	42.51
0.007	0.1768	2.50	80	51.01	48.99	0.0041	0.1051	3.25	140	59.51	40.49
0.005	0.1250	3.00	120	56.11	43.89	0.0035	0.0884	3.50	170	61.16	38.84
0.003	0.0743	3.75	200	61.37	38.63	0.0029	0.0743	3.75	200	62.56	37.44
0.002	0.0526	4.25	270	61.89	38.11	0.0025	0.0625	4.00	230	63.82	36.18
0.001	0.0372	4.75	400	61.94	38.06	0.0021	0.0526	4.25	270	65.07	34.93
			PAN	100	0.00	0.0017	0.0442	4.50	325	66.35	33.65
						0.0015	0.0372	4.75	400	67.73	32.27
						0.0012	0.0313	5.00	450	69.21	30.79
						0.0010	0.0250	5.32	500	70.79	29.21
						0.0008	0.0201	5.64	635	72.91	27.09
						0.0006	0.0156	6.00		75.13	24.87
						0.0004	0.0110	6.50		77.75	22.25
						0.0003	0.0078	7.00		81.56	18.44
						0.0002	0.0050	7.65		85.22	14.78
						0.00008	0.00195	9.00		89.25	10.75
						0.00004	0.00098	10.00		95.10	4.90
						0.00002	0.00049	11.00		98.15	1.85
						0.00001	0.00038	11.38		100.00	0.00

Client: PES Environmental, Inc., **IGL ID:-** 13 **IGL File No:** 49143
Project: American Linen **Sample ID:** MW-302-60
Project No: 1413-001-02-501B **Depth, ft:** 60

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA

(Tabular Data plus Statistics)

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA						
Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1.00	0.0	100.0	0.0
0.492	12.5	-3.64	1/2	2.1	97.9	2.1
0.374	9.50	-3.25	3/8	4.1	93.7	6.3
0.250	6.35	-2.67	1/4	2.8	90.9	9.1
0.1873	4.76	-2.25	4	2.5	88.5	11.5
0.1324	3.364	-1.75	6	2.1	86.4	13.6
0.0787	2.000	-1.00	10	2.4	84.0	16.0
0.0557	1.414	-0.50	14	2.1	81.9	18.1
0.0394	1.000	0.00	18	2.1	79.9	20.1
0.0278	0.707	0.50	25	2.9	77.0	23.0
0.0197	0.500	1.00	35	4.9	72.1	27.9
0.01655	0.420	1.25	40	0.2	71.9	28.1
0.01392	0.354	1.50	45	6.3	65.6	34.4
0.00984	0.2500	2.00	60	9.1	56.5	43.5
0.00696	0.1768	2.50	80	7.5	49.0	51.0
0.00585	0.1487	2.75	100	4.1	44.9	55.1
0.00492	0.1250	3.00	120	2.4	42.5	57.5
0.00414	0.1051	3.25	140	2.0	40.5	59.5
0.00348	0.0884	3.50	170	1.7	38.8	61.2
0.00293	0.0743	3.75	200	1.4	37.4	62.6
0.00246	0.0625	4.00	230	1.3	36.2	63.8
0.00207	0.0526	4.25	270	1.3	34.9	65.1
0.00174	0.0442	4.50	325	1.3	33.6	66.4
0.00146	0.0372	4.75	400	1.4	32.3	67.7
0.00123	0.0313	5.00	450	1.5	30.8	69.2
0.00099	0.0250	5.32	500	1.6	29.2	70.8
0.00079	0.0201	5.64	635	2.1	27.1	72.9
0.00062	0.0156	6.00		2.2	24.9	75.1
0.00043	0.0110	6.50		2.6	22.3	77.7
0.00031	0.0078	7.00		3.8	18.4	81.6
0.00020	0.0050	7.65		3.7	14.8	85.2
0.00008	0.0020	9.00		4.0	10.8	89.2
0.00004	0.0010	10.00		5.9	4.9	95.1
0.00002	0.0005	11.00		3.0	1.9	98.1
0.00001	0.0004	11.38		1.9	0.0	100.0
TOTALS				100.0	100.0	100.0

COMBINED DATA STATISTICS			
Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-3.37	0.4068	10.333
10	-2.51	0.2239	5.687
16	-1.00	0.0789	2.004
25	0.71	0.0241	0.613
40	1.81	0.0112	0.286
50	2.43	0.0073	0.185
60	3.32	0.0039	0.100
75	5.98	0.0006	0.016
84	7.43	0.0002	0.006
90	9.13	0.0001	0.002
95	9.98	0.0000	0.001

Measure	Trask	Inman	Folk-Ward
Median, phi	2.43	2.43	2.43
Median, in.	0.0073	0.0073	0.0073
Median, mm	0.185	0.185	0.185
Mean, phi	1.67	3.21	2.95
Mean, in.	0.0124	0.0042	0.0051
Mean, mm	0.315	0.108	0.129
Sorting	6.220	4.216	4.131
Skewness	0.532	0.185	0.158
Kurtosis	0.053	0.583	1.038
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Trask Median)		

Description (ASTM-USCS Scale)	Retained on Sieve #	Weight Percent
Gravel	4	11.5
Coarse Sand	10	4.5
Medium Sand	40	12.1
Fine Sand	200	34.5
Silt	>0.005 mm	22.7
Clay	<0.005 mm	14.8
Total		100

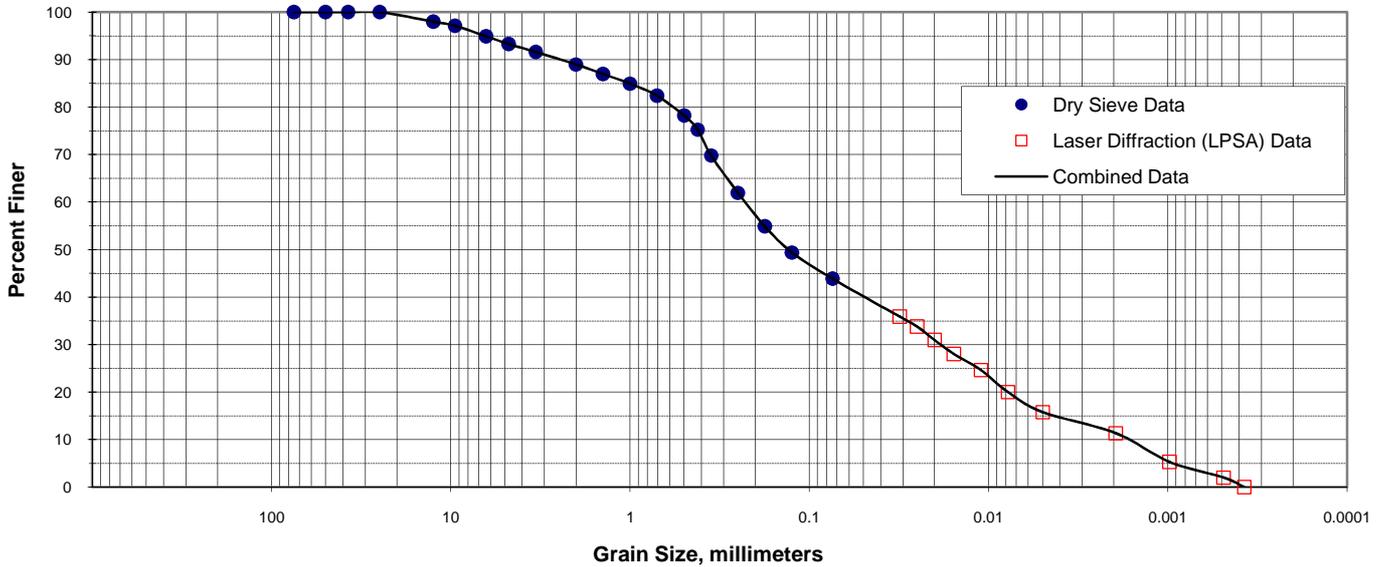
Notes: Dry sieve preparation was drying followed by pass/retained (wash) on 200 sieve.

Client: PES Environmental, Inc.,
Project: American Linen
Project No: 1413-001-02-501B

IGL ID:- 14

IGL File No: 49143
Sample ID: MW-190-48
Depth, ft: 48

COMBINED SIEVE + LASER DIFFRACTION DATA



Dry Sieve Data						Laser Diffraction (LPSA) Data					
Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer	Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer
Inches	Millimeters					Inches	Millimeters				
2.95	75.0	-6.23	3"	0.00	100.00	0.250	6.351	-2.67	1/4	0.00	100.00
1.97	50.0	-5.64	2"	0.00	100.00	0.187	4.757	-2.25	4	0.00	100.00
1.48	37.5	-5.23	1-1/2"	0.00	100.00	0.132	3.364	-1.75	6	0.00	100.00
0.984	25.0	-4.64	1	0.00	100.00	0.079	2.000	-1.00	10	0.00	100.00
0.492	12.5	-3.64	1/2	2.02	97.98	0.047	1.189	-0.25	16	0.00	100.00
0.374	9.50	-3.25	3/8	2.85	97.15	0.033	0.841	0.25	20	1.75	98.25
0.250	6.35	-2.67	1/4	5.09	94.91	0.028	0.707	0.50	25	8.42	91.58
0.187	4.76	-2.25	4	6.72	93.28	0.023	0.595	0.75	30	11.94	88.06
0.132	3.36	-1.75	6	8.36	91.64	0.020	0.500	1.00	35	15.98	84.02
0.079	2.00	-1.00	10	10.96	89.04	0.017	0.420	1.25	40	20.68	79.32
0.056	1.414	-0.50	14	13.00	87.00	0.0139	0.3536	1.50	45	25.75	74.25
0.039	1.000	0.00	18	15.00	85.00	0.0117	0.2973	1.75	50	30.03	69.97
0.028	0.707	0.50	25	17.59	82.41	0.0098	0.2500	2.00	60	35.75	64.25
0.020	0.500	1.00	35	21.76	78.24	0.0083	0.2102	2.25	70	40.26	59.74
0.017	0.420	1.25	40	24.69	75.31	0.0070	0.1768	2.50	80	44.26	55.74
0.014	0.354	1.50	45	30.13	69.87	0.0059	0.1487	2.75	100	47.61	52.39
0.010	0.250	2.00	60	37.99	62.01	0.0049	0.1250	3.00	120	50.32	49.68
0.007	0.1768	2.50	80	45.07	54.93	0.0041	0.1051	3.25	140	52.49	47.51
0.005	0.1250	3.00	120	50.54	49.46	0.0035	0.0884	3.50	170	54.27	45.73
0.003	0.0743	3.75	200	56.12	43.88	0.0029	0.0743	3.75	200	55.84	44.16
0.002	0.0526	4.25	270	56.39	43.61	0.0025	0.0625	4.00	230	57.33	42.67
0.001	0.0372	4.75	400	56.42	43.58	0.0021	0.0526	4.25	270	58.81	41.19
			PAN	100	0.00	0.0017	0.0442	4.50	325	60.38	39.62
						0.0015	0.0372	4.75	400	62.14	37.86
						0.0012	0.0313	5.00	450	64.09	35.91
						0.0010	0.0250	5.32	500	66.20	33.80
						0.0008	0.0201	5.64	635	69.02	30.98
						0.0006	0.0156	6.00		71.95	28.05
						0.0004	0.0110	6.50		75.29	24.71
						0.0003	0.0078	7.00		79.93	20.07
						0.0002	0.0050	7.65		84.16	15.84
						0.00008	0.00195	9.00		88.58	11.42
						0.00004	0.00098	10.00		94.68	5.32
						0.00002	0.00049	11.00		97.94	2.06
						0.00001	0.00038	11.38		100.00	0.00

Client: PES Environmental, Inc., **IGL ID:-** 14 **IGL File No:** 49143
Project: American Linen **Sample ID:** MW-190-48
Project No: 1413-001-02-501B **Depth, ft:** 48

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA

(Tabular Data plus Statistics)

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA						
Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1.00	0.0	100.0	0.0
0.492	12.5	-3.64	1/2	2.0	98.0	2.0
0.374	9.50	-3.25	3/8	0.8	97.1	2.9
0.250	6.35	-2.67	1/4	2.2	94.9	5.1
0.1873	4.76	-2.25	4	1.6	93.3	6.7
0.1324	3.364	-1.75	6	1.6	91.6	8.4
0.0787	2.000	-1.00	10	2.6	89.0	11.0
0.0557	1.414	-0.50	14	2.0	87.0	13.0
0.0394	1.000	0.00	18	2.0	85.0	15.0
0.0278	0.707	0.50	25	2.6	82.4	17.6
0.0197	0.500	1.00	35	4.2	78.2	21.8
0.01655	0.420	1.25	40	2.9	75.3	24.7
0.01392	0.354	1.50	45	5.4	69.9	30.1
0.00984	0.2500	2.00	60	7.9	62.0	38.0
0.00696	0.1768	2.50	80	7.1	54.9	45.1
0.00585	0.1487	2.75	100	2.5	52.4	47.6
0.00492	0.1250	3.00	120	2.7	49.7	50.3
0.00414	0.1051	3.25	140	2.2	47.5	52.5
0.00348	0.0884	3.50	170	1.8	45.7	54.3
0.00293	0.0743	3.75	200	1.6	44.2	55.8
0.00246	0.0625	4.00	230	1.5	42.7	57.3
0.00207	0.0526	4.25	270	1.5	41.2	58.8
0.00174	0.0442	4.50	325	1.6	39.6	60.4
0.00146	0.0372	4.75	400	1.8	37.9	62.1
0.00123	0.0313	5.00	450	2.0	35.9	64.1
0.00099	0.0250	5.32	500	2.1	33.8	66.2
0.00079	0.0201	5.64	635	2.8	31.0	69.0
0.00062	0.0156	6.00		2.9	28.1	71.9
0.00043	0.0110	6.50		3.3	24.7	75.3
0.00031	0.0078	7.00		4.6	20.1	79.9
0.00020	0.0050	7.65		4.2	15.8	84.2
0.00008	0.0020	9.00		4.4	11.4	88.6
0.00004	0.0010	10.00		6.1	5.3	94.7
0.00002	0.0005	11.00		3.3	2.1	97.9
0.00001	0.0004	11.38		2.1	0.0	100.0
TOTALS				100.0	100.0	100.0

COMBINED DATA STATISTICS			
Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-2.69	0.2543	6.458
10	-1.28	0.0955	2.425
16	0.19	0.0344	0.875
25	1.26	0.0164	0.416
40	2.14	0.0089	0.227
50	2.97	0.0050	0.128
60	4.44	0.0018	0.046
75	6.46	0.0004	0.011
84	7.62	0.0002	0.005
90	9.23	0.0001	0.002
95	10.10	0.0000	0.001

Measure	Trask	Inman	Folk-Ward
Median, phi	2.97	2.97	2.97
Median, in.	0.0050	0.0050	0.0050
Median, mm	0.128	0.128	0.128
Mean, phi	2.23	3.91	3.60
Mean, in.	0.0084	0.0026	0.0033
Mean, mm	0.214	0.067	0.083
Sorting	6.048	3.714	3.795
Skewness	0.539	0.252	0.183
Kurtosis	0.084	0.722	1.009

Grain Size Description (ASTM-USCS Scale) Fine sand (based on Trask Median)

Description (ASTM-USCS Scale)	Retained on Sieve #	Weight Percent
Gravel	4	6.7
Coarse Sand	10	4.2
Medium Sand	40	13.7
Fine Sand	200	31.2
Silt	>0.005 mm	28.3
Clay	<0.005 mm	15.8
Total		100

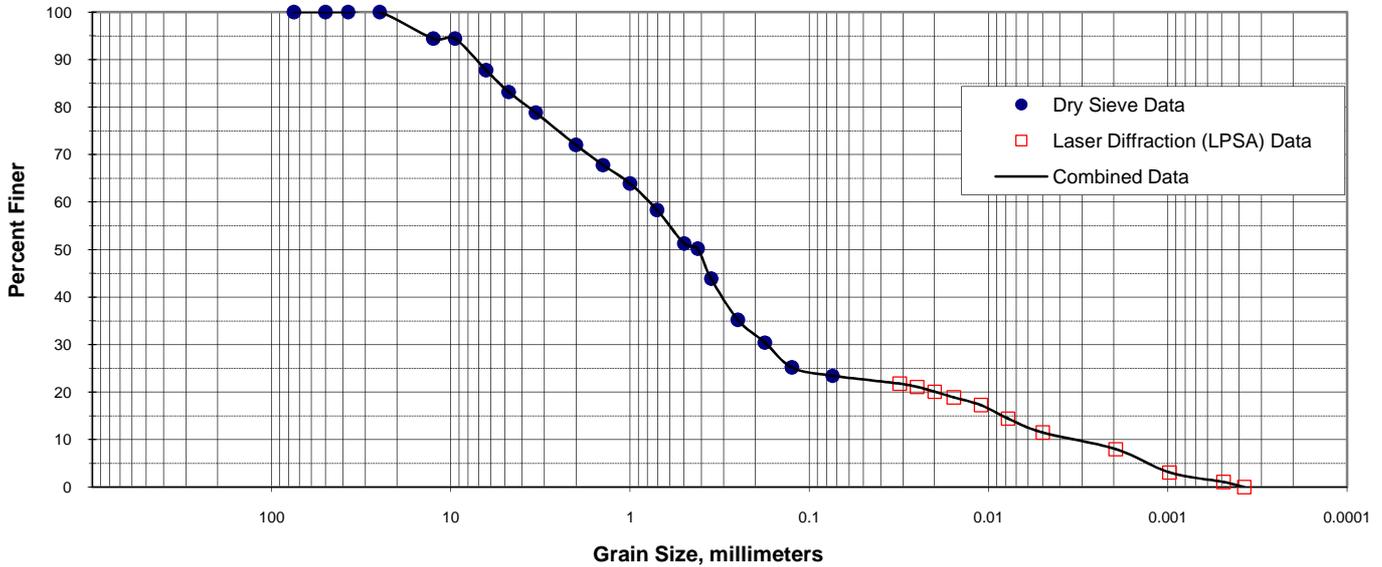
Notes: Dry sieve preparation was drying followed by pass/retained (wash) on 200 sieve.

Client: PES Environmental, Inc.,
Project: American Linen
Project No: 1413-001-02-501B

IGL ID:- 15

IGL File No: 49143
Sample ID: MW-316-58
Depth, ft: 58

COMBINED SIEVE + LASER DIFFRACTION DATA



Dry Sieve Data						Laser Diffraction (LPSA) Data					
Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer	Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer
Inches	Millimeters					Inches	Millimeters				
2.95	75.0	-6.23	3"	0.00	100.00	0.250	6.351	-2.67	1/4	0.00	100.00
1.97	50.0	-5.64	2"	0.00	100.00	0.187	4.757	-2.25	4	0.00	100.00
1.48	37.5	-5.23	1-1/2"	0.00	100.00	0.132	3.364	-1.75	6	0.00	100.00
0.984	25.0	-4.64	1	0.00	100.00	0.079	2.000	-1.00	10	0.00	100.00
0.492	12.5	-3.64	1/2	5.57	94.43	0.047	1.189	-0.25	16	0.00	100.00
0.374	9.50	-3.25	3/8	5.57	94.43	0.033	0.841	0.25	20	13.81	86.19
0.250	6.35	-2.67	1/4	12.22	87.78	0.028	0.707	0.50	25	26.33	73.67
0.187	4.76	-2.25	4	16.75	83.25	0.023	0.595	0.75	30	32.63	67.37
0.132	3.36	-1.75	6	21.14	78.86	0.020	0.500	1.00	35	38.72	61.28
0.079	2.00	-1.00	10	27.95	72.05	0.017	0.420	1.25	40	44.62	55.38
0.056	1.414	-0.50	14	32.13	67.87	0.0139	0.3536	1.50	45	50.19	49.81
0.039	1.000	0.00	18	36.05	63.95	0.0117	0.2973	1.75	50	54.48	45.52
0.028	0.707	0.50	25	41.67	58.33	0.0098	0.2500	2.00	60	59.95	40.05
0.020	0.500	1.00	35	48.69	51.31	0.0083	0.2102	2.25	70	64.23	35.77
0.017	0.420	1.25	40	49.79	50.21	0.0070	0.1768	2.50	80	67.96	32.04
0.014	0.354	1.50	45	56.09	43.91	0.0059	0.1487	2.75	100	70.85	29.15
0.010	0.250	2.00	60	64.76	35.24	0.0049	0.1250	3.00	120	72.81	27.19
0.007	0.1768	2.50	80	69.50	30.50	0.0041	0.1051	3.25	140	74.07	25.93
0.005	0.1250	3.00	120	74.80	25.20	0.0035	0.0884	3.50	170	74.92	25.08
0.003	0.0743	3.75	200	76.50	23.50	0.0029	0.0743	3.75	200	75.59	24.41
0.002	0.0526	4.25	270	81.31	18.69	0.0025	0.0625	4.00	230	76.17	23.83
0.001	0.0372	4.75	400	81.31	18.69	0.0021	0.0526	4.25	270	76.69	23.31
			PAN	100	0.00	0.0017	0.0442	4.50	325	77.17	22.83
						0.0015	0.0372	4.75	400	77.65	22.35
						0.0012	0.0313	5.00	450	78.20	21.80
						0.0010	0.0250	5.32	500	78.86	21.14
						0.0008	0.0201	5.64	635	79.86	20.14
						0.0006	0.0156	6.00		81.08	18.92
						0.0004	0.0110	6.50		82.72	17.28
						0.0003	0.0078	7.00		85.51	14.49
						0.0002	0.0050	7.65		88.48	11.52
						0.00008	0.00195	9.00		91.96	8.04
						0.00004	0.00098	10.00		96.86	3.14
						0.00002	0.00049	11.00		98.90	1.10
						0.00001	0.00038	11.38		100.00	0.00

Client: PES Environmental, Inc., IGL ID:- 15 IGL File No: 49143
 Project: American Linen Sample ID: MW-316-58
 Project No: 1413-001-02-501B Depth, ft: 58

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA
 (Tabular Data plus Statistics)

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA						
Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1.00	0.0	100.0	0.0
0.492	12.5	-3.64	1/2	5.6	94.4	5.6
0.374	9.50	-3.25	3/8	0.0	94.4	5.6
0.250	6.35	-2.67	1/4	6.7	87.8	12.2
0.1873	4.76	-2.25	4	4.5	83.2	16.8
0.1324	3.364	-1.75	6	4.4	78.9	21.1
0.0787	2.000	-1.00	10	6.8	72.0	28.0
0.0557	1.414	-0.50	14	4.2	67.9	32.1
0.0394	1.000	0.00	18	3.9	63.9	36.1
0.0278	0.707	0.50	25	5.6	58.3	41.7
0.0197	0.500	1.00	35	7.0	51.3	48.7
0.01655	0.420	1.25	40	1.1	50.2	49.8
0.01392	0.354	1.50	45	6.3	43.9	56.1
0.00984	0.2500	2.00	60	8.7	35.2	64.8
0.00696	0.1768	2.50	80	4.7	30.5	69.5
0.00585	0.1487	2.75	100	1.4	29.1	70.9
0.00492	0.1250	3.00	120	2.0	27.2	72.8
0.00414	0.1051	3.25	140	1.3	25.9	74.1
0.00348	0.0884	3.50	170	0.9	25.1	74.9
0.00293	0.0743	3.75	200	0.7	24.4	75.6
0.00246	0.0625	4.00	230	0.6	23.8	76.2
0.00207	0.0526	4.25	270	0.5	23.3	76.7
0.00174	0.0442	4.50	325	0.5	22.8	77.2
0.00146	0.0372	4.75	400	0.5	22.4	77.6
0.00123	0.0313	5.00	450	0.6	21.8	78.2
0.00099	0.0250	5.32	500	0.7	21.1	78.9
0.00079	0.0201	5.64	635	1.0	20.1	79.9
0.00062	0.0156	6.00		1.2	18.9	81.1
0.00043	0.0110	6.50		1.6	17.3	82.7
0.00031	0.0078	7.00		2.8	14.5	85.5
0.00020	0.0050	7.65		3.0	11.5	88.5
0.00008	0.0020	9.00		3.5	8.0	92.0
0.00004	0.0010	10.00		4.9	3.1	96.9
0.00002	0.0005	11.00		2.0	1.1	98.9
0.00001	0.0004	11.38		1.1	0.0	100.0
TOTALS				100.0	100.0	100.0

COMBINED DATA STATISTICS			
Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-3.39	0.4127	10.482
10	-2.86	0.2860	7.264
16	-2.32	0.1965	4.991
25	-1.32	0.0986	2.505
40	0.35	0.0309	0.784
50	1.26	0.0165	0.418
60	1.73	0.0119	0.302
75	3.53	0.0034	0.087
84	6.73	0.0004	0.009
90	8.24	0.0001	0.003
95	9.62	0.0001	0.001

Measure	Trask	Inman	Folk-Ward
Median, phi	1.26	1.26	1.26
Median, in.	0.0165	0.0165	0.0165
Median, mm	0.418	0.418	0.418
Mean, phi	-0.37	2.21	1.89
Mean, in.	0.0510	0.0085	0.0106
Mean, mm	1.296	0.217	0.270
Sorting	5.377	4.524	4.234
Skewness	1.115	0.209	0.247
Kurtosis	0.167	0.438	1.099

Grain Size Description Fine sand
 (ASTM-USCS Scale) (based on Trask Median)

Description (ASTM-USCS Scale)	Retained on Sieve #	Weight Percent
Gravel	4	16.8
Coarse Sand	10	11.2
Medium Sand	40	21.8
Fine Sand	200	25.8
Silt	>0.005 mm	12.9
Clay	<0.005 mm	11.5
Total		100

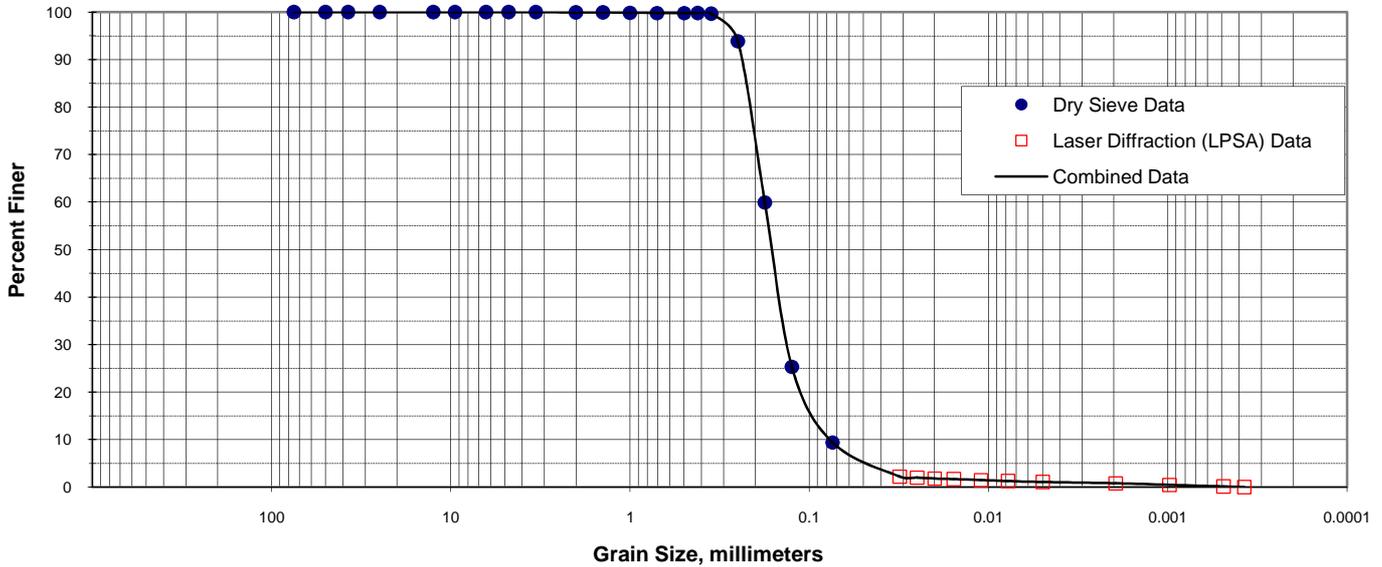
Notes: Dry sieve preparation was drying followed by pass/retained (wash) on 200 sieve.

Client: PES Environmental, Inc.,
Project: American Linen
Project No: 1413-001-02-501B

IGL ID:- 16

IGL File No: 49143
Sample ID: MW-311-48
Depth, ft: 48

COMBINED SIEVE + LASER DIFFRACTION DATA



Dry Sieve Data						Laser Diffraction (LPSA) Data					
Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer	Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer
Inches	Millimeters					Inches	Millimeters				
2.95	75.0	-6.23	3"	0.00	100.00	0.250	6.351	-2.67	1/4	0.00	100.00
1.97	50.0	-5.64	2"	0.00	100.00	0.187	4.757	-2.25	4	0.00	100.00
1.48	37.5	-5.23	1-1/2"	0.00	100.00	0.132	3.364	-1.75	6	0.00	100.00
0.984	25.0	-4.64	1	0.00	100.00	0.079	2.000	-1.00	10	0.00	100.00
0.492	12.5	-3.64	1/2	0.00	100.00	0.047	1.189	-0.25	16	0.00	100.00
0.374	9.50	-3.25	3/8	0.00	100.00	0.033	0.841	0.25	20	0.00	100.00
0.250	6.35	-2.67	1/4	0.00	100.00	0.028	0.707	0.50	25	0.00	100.00
0.187	4.76	-2.25	4	0.00	100.00	0.023	0.595	0.75	30	0.00	100.00
0.132	3.36	-1.75	6	0.00	100.00	0.020	0.500	1.00	35	0.18	99.82
0.079	2.00	-1.00	10	0.04	99.96	0.017	0.420	1.25	40	0.76	99.24
0.056	1.414	-0.50	14	0.05	99.95	0.0139	0.3536	1.50	45	1.85	98.15
0.039	1.000	0.00	18	0.08	99.92	0.0117	0.2973	1.75	50	4.37	95.63
0.028	0.707	0.50	25	0.15	99.85	0.0098	0.2500	2.00	60	13.13	86.87
0.020	0.500	1.00	35	0.16	99.84	0.0083	0.2102	2.25	70	26.72	73.28
0.017	0.420	1.25	40	0.17	99.83	0.0070	0.1768	2.50	80	44.41	55.59
0.014	0.354	1.50	45	0.34	99.66	0.0059	0.1487	2.75	100	62.31	37.69
0.010	0.250	2.00	60	6.07	93.93	0.0049	0.1250	3.00	120	76.80	23.20
0.007	0.1768	2.50	80	40.00	60.00	0.0041	0.1051	3.25	140	86.28	13.72
0.005	0.1250	3.00	120	74.61	25.39	0.0035	0.0884	3.50	170	91.53	8.47
0.003	0.0743	3.75	200	90.54	9.46	0.0029	0.0743	3.75	200	94.23	5.77
0.002	0.0526	4.25	270	91.78	8.22	0.0025	0.0625	4.00	230	95.68	4.32
0.001	0.0372	4.75	400	91.84	8.16	0.0021	0.0526	4.25	270	96.56	3.44
			PAN	100	0.00	0.0017	0.0442	4.50	325	97.12	2.88
						0.0015	0.0372	4.75	400	97.48	2.52
						0.0012	0.0313	5.00	450	97.73	2.27
						0.0010	0.0250	5.32	500	97.93	2.07
						0.0008	0.0201	5.64	635	98.14	1.86
						0.0006	0.0156	6.00		98.31	1.69
						0.0004	0.0110	6.50		98.48	1.52
						0.0003	0.0078	7.00		98.71	1.29
						0.0002	0.0050	7.65		98.92	1.08
						0.00008	0.00195	9.00		99.14	0.86
						0.00004	0.00098	10.00		99.47	0.53
						0.00002	0.00049	11.00		99.83	0.17
						0.00001	0.00038	11.38		100.00	0.00

Client: PES Environmental, Inc., **IGL ID:-** 16 **IGL File No:** 49143
Project: American Linen **Sample ID:** MW-311-48
Project No: 1413-001-02-501B **Depth, ft:** 48

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA

(Tabular Data plus Statistics)

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA						
Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1.00	0.0	100.0	0.0
0.492	12.5	-3.64	1/2	0.0	100.0	0.0
0.374	9.50	-3.25	3/8	0.0	100.0	0.0
0.250	6.35	-2.67	1/4	0.0	100.0	0.0
0.1873	4.76	-2.25	4	0.0	100.0	0.0
0.1324	3.364	-1.75	6	0.0	100.0	0.0
0.0787	2.000	-1.00	10	0.0	100.0	0.0
0.0557	1.414	-0.50	14	0.0	99.9	0.1
0.0394	1.000	0.00	18	0.0	99.9	0.1
0.0278	0.707	0.50	25	0.1	99.9	0.1
0.0197	0.500	1.00	35	0.0	99.8	0.2
0.01655	0.420	1.25	40	0.0	99.8	0.2
0.01392	0.354	1.50	45	0.2	99.7	0.3
0.00984	0.2500	2.00	60	5.7	93.9	6.1
0.00696	0.1768	2.50	80	33.9	60.0	40.0
0.00585	0.1487	2.75	100	22.3	37.7	62.3
0.00492	0.1250	3.00	120	14.5	23.2	76.8
0.00414	0.1051	3.25	140	9.5	13.7	86.3
0.00348	0.0884	3.50	170	5.3	8.5	91.5
0.00293	0.0743	3.75	200	2.7	5.8	94.2
0.00246	0.0625	4.00	230	1.4	4.3	95.7
0.00207	0.0526	4.25	270	0.9	3.4	96.6
0.00174	0.0442	4.50	325	0.6	2.9	97.1
0.00146	0.0372	4.75	400	0.4	2.5	97.5
0.00123	0.0313	5.00	450	0.2	2.3	97.7
0.00099	0.0250	5.32	500	0.2	2.1	97.9
0.00079	0.0201	5.64	635	0.2	1.9	98.1
0.00062	0.0156	6.00		0.2	1.7	98.3
0.00043	0.0110	6.50		0.2	1.5	98.5
0.00031	0.0078	7.00		0.2	1.3	98.7
0.00020	0.0050	7.65		0.2	1.1	98.9
0.00008	0.0020	9.00		0.2	0.9	99.1
0.00004	0.0010	10.00		0.3	0.5	99.5
0.00002	0.0005	11.00		0.4	0.2	99.8
0.00001	0.0004	11.38		0.2	0.0	100.0
TOTALS				100.0	100.0	

COMBINED DATA STATISTICS			
Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	1.91	0.0105	0.267
10	2.06	0.0095	0.240
16	2.15	0.0089	0.226
25	2.28	0.0081	0.206
40	2.50	0.0070	0.177
50	2.61	0.0064	0.164
60	2.72	0.0060	0.151
75	2.97	0.0050	0.128
84	3.19	0.0043	0.110
90	3.43	0.0037	0.093
95	3.88	0.0027	0.068

Measure	Trask	Inman	Folk-Ward
Median, phi	2.61	2.61	2.61
Median, in.	0.0064	0.0064	0.0064
Median, mm	0.164	0.164	0.164
Mean, phi	2.58	2.67	2.65
Mean, in.	0.0066	0.0062	0.0063
Mean, mm	0.167	0.157	0.159
Sorting	1.270	0.522	0.560
Skewness	0.992	0.107	0.197
Kurtosis	0.266	0.893	1.173

Grain Size Description (ASTM-USCS Scale) Fine sand (based on Trask Median)

Description (ASTM-USCS Scale)	Retained on Sieve #	Weight Percent
Gravel	4	0.0
Coarse Sand	10	0.0
Medium Sand	40	0.1
Fine Sand	200	94.1
Silt	>0.005 mm	4.7
Clay	<0.005 mm	1.1
Total		100

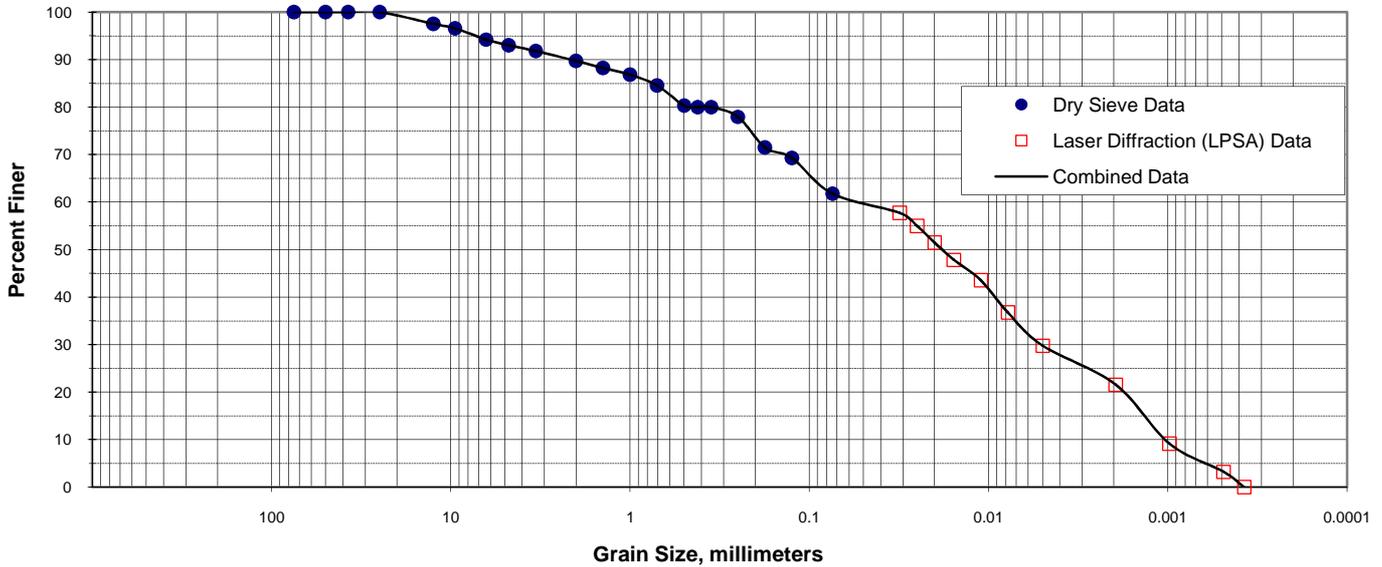
Notes: Dry sieve preparation was drying followed by pass/retained (wash) on 200 sieve.

Client: PES Environmental, Inc.,
Project: American Linen
Project No: 1413-001-02-501B

IGL ID:- 17

IGL File No: 49143
Sample ID: MW-309-59
Depth, ft: 59

COMBINED SIEVE + LASER DIFFRACTION DATA



Dry Sieve Data						Laser Diffraction (LPSA) Data					
Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer	Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer
Inches	Millimeters					Inches	Millimeters				
2.95	75.0	-6.23	3"	0.00	100.00	0.250	6.351	-2.67	1/4	0.00	100.00
1.97	50.0	-5.64	2"	0.00	100.00	0.187	4.757	-2.25	4	0.00	100.00
1.48	37.5	-5.23	1-1/2"	0.00	100.00	0.132	3.364	-1.75	6	0.00	100.00
0.984	25.0	-4.64	1	0.00	100.00	0.079	2.000	-1.00	10	0.00	100.00
0.492	12.5	-3.64	1/2	2.45	97.55	0.047	1.189	-0.25	16	0.00	100.00
0.374	9.50	-3.25	3/8	3.41	96.59	0.033	0.841	0.25	20	0.00	100.00
0.250	6.35	-2.67	1/4	5.74	94.26	0.028	0.707	0.50	25	0.02	99.98
0.187	4.76	-2.25	4	6.97	93.03	0.023	0.595	0.75	30	0.33	99.67
0.132	3.36	-1.75	6	8.20	91.80	0.020	0.500	1.00	35	1.48	98.52
0.079	2.00	-1.00	10	10.26	89.74	0.017	0.420	1.25	40	3.38	96.62
0.056	1.414	-0.50	14	11.76	88.24	0.0139	0.3536	1.50	45	5.66	94.34
0.039	1.000	0.00	18	13.14	86.86	0.0117	0.2973	1.75	50	7.61	92.39
0.028	0.707	0.50	25	15.43	84.57	0.0098	0.2500	2.00	60	10.17	89.83
0.020	0.500	1.00	35	19.67	80.33	0.0083	0.2102	2.25	70	12.28	87.72
0.017	0.420	1.25	40	19.99	80.01	0.0070	0.1768	2.50	80	14.47	85.53
0.014	0.354	1.50	45	20.00	80.00	0.0059	0.1487	2.75	100	29.50	70.50
0.010	0.250	2.00	60	22.00	78.00	0.0049	0.1250	3.00	120	29.80	70.20
0.007	0.1768	2.50	80	28.49	71.51	0.0041	0.1051	3.25	140	30.10	69.90
0.005	0.1250	3.00	120	30.70	69.30	0.0035	0.0884	3.50	170	30.30	69.70
0.003	0.0743	3.75	200	38.20	61.80	0.0029	0.0743	3.75	200	30.55	69.45
0.002	0.0526	4.25	270	51.74	48.26	0.0025	0.0625	4.00	230	30.92	69.08
0.001	0.0372	4.75	400	51.74	48.26	0.0021	0.0526	4.25	270	33.81	66.19
			PAN	100	0.00	0.0017	0.0442	4.50	325	36.64	63.36
						0.0015	0.0372	4.75	400	39.45	60.55
						0.0012	0.0313	5.00	450	42.24	57.76
						0.0010	0.0250	5.32	500	45.00	55.00
						0.0008	0.0201	5.64	635	48.49	51.51
						0.0006	0.0156	6.00		52.11	47.89
						0.0004	0.0110	6.50		56.45	43.55
						0.0003	0.0078	7.00		63.21	36.79
						0.0002	0.0050	7.65		70.17	29.83
						0.00008	0.00195	9.00		78.38	21.62
						0.00004	0.00098	10.00		90.83	9.17
						0.00002	0.00049	11.00		96.73	3.27
						0.00001	0.00038	11.38		100.00	0.00

Client: PES Environmental, Inc., **IGL ID:-** 17 **IGL File No:** 49143
Project: American Linen **Sample ID:** MW-309-59
Project No: 1413-001-02-501B **Depth, ft:** 59

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA

(Tabular Data plus Statistics)

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA						
Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1.00	0.0	100.0	0.0
0.492	12.5	-3.64	1/2	2.5	97.5	2.5
0.374	9.50	-3.25	3/8	1.0	96.6	3.4
0.250	6.35	-2.67	1/4	2.3	94.3	5.7
0.1873	4.76	-2.25	4	1.2	93.0	7.0
0.1324	3.364	-1.75	6	1.2	91.8	8.2
0.0787	2.000	-1.00	10	2.1	89.7	10.3
0.0557	1.414	-0.50	14	1.5	88.2	11.8
0.0394	1.000	0.00	18	1.4	86.9	13.1
0.0278	0.707	0.50	25	2.3	84.6	15.4
0.0197	0.500	1.00	35	4.2	80.3	19.7
0.01655	0.420	1.25	40	0.3	80.0	20.0
0.01392	0.354	1.50	45	0.0	80.0	20.0
0.00984	0.2500	2.00	60	2.0	78.0	22.0
0.00696	0.1768	2.50	80	6.5	71.5	28.5
0.00585	0.1487	2.75	100	1.0	70.5	29.5
0.00492	0.1250	3.00	120	0.3	70.2	29.8
0.00414	0.1051	3.25	140	0.3	69.9	30.1
0.00348	0.0884	3.50	170	0.2	69.7	30.3
0.00293	0.0743	3.75	200	0.3	69.5	30.6
0.00246	0.0625	4.00	230	0.4	69.1	30.9
0.00207	0.0526	4.25	270	2.9	66.2	33.8
0.00174	0.0442	4.50	325	2.8	63.4	36.6
0.00146	0.0372	4.75	400	2.8	60.5	39.5
0.00123	0.0313	5.00	450	2.8	57.8	42.2
0.00099	0.0250	5.32	500	2.8	55.0	45.0
0.00079	0.0201	5.64	635	3.5	51.5	48.5
0.00062	0.0156	6.00		3.6	47.9	52.1
0.00043	0.0110	6.50		4.3	43.5	56.5
0.00031	0.0078	7.00		6.8	36.8	63.2
0.00020	0.0050	7.65		7.0	29.8	70.2
0.00008	0.0020	9.00		8.2	21.6	78.4
0.00004	0.0010	10.00		12.4	9.2	90.8
0.00002	0.0005	11.00		5.9	3.3	96.7
0.00001	0.0004	11.38		3.3	0.0	100.0
TOTALS				100.0		100.0

COMBINED DATA STATISTICS			
Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-2.85	0.2840	7.215
10	-1.09	0.0841	2.135
16	0.57	0.0266	0.675
25	2.23	0.0084	0.213
40	4.80	0.0014	0.036
50	5.79	0.0007	0.018
60	6.76	0.0004	0.009
75	8.44	0.0001	0.003
84	9.45	0.0001	0.001
90	9.93	0.0000	0.001
95	10.71	0.0000	0.001

Measure	Trask	Inman	Folk-Ward
Median, phi	5.79	5.79	5.79
Median, in.	0.0007	0.0007	0.0007
Median, mm	0.018	0.018	0.018
Mean, phi	3.21	5.01	5.27
Mean, in.	0.0042	0.0012	0.0010
Mean, mm	0.108	0.031	0.026
Sorting	8.606	4.442	4.275
Skewness	1.369	-0.176	-0.225
Kurtosis	0.049	0.526	0.895

Grain Size Description Silt
 (ASTM-USCS Scale) (based on Trask Median)

Description (ASTM-USCS Scale)	Retained on Sieve #	Weight Percent
Gravel	4	7.0
Coarse Sand	10	3.3
Medium Sand	40	9.7
Fine Sand	200	10.6
Silt	>0.005 mm	39.6
Clay	<0.005 mm	29.8
Total		100

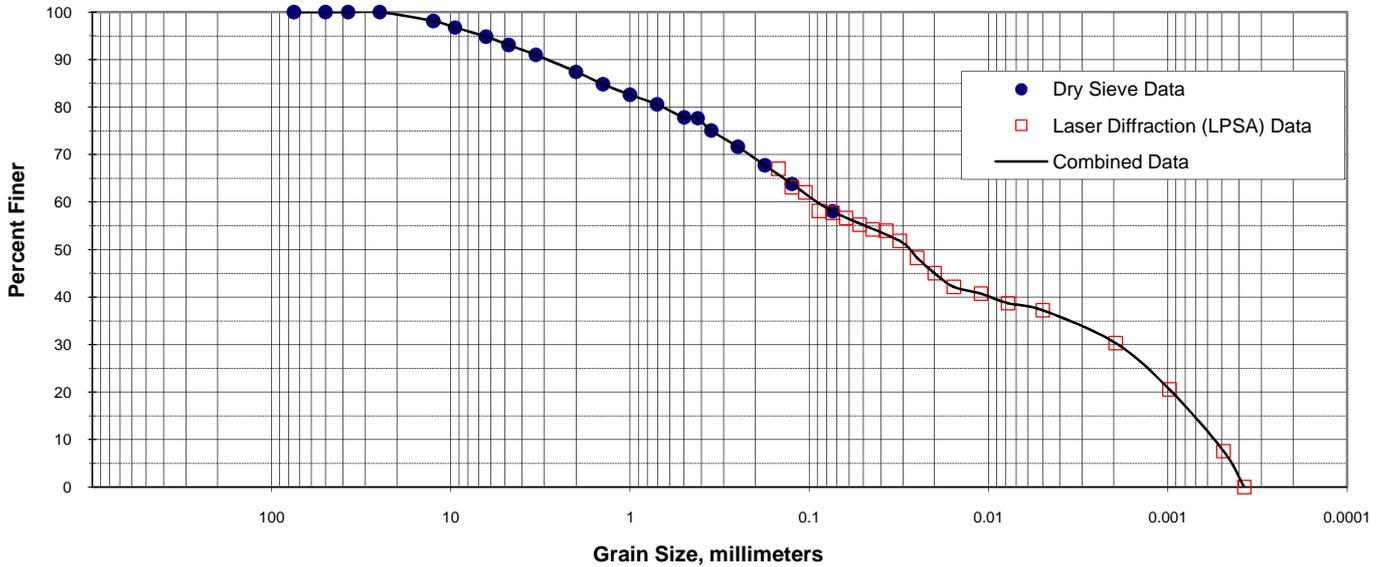
Notes: Dry sieve preparation was drying followed by pass/retained (wash) on 200 sieve.

Client: PES Environmental, Inc.,
Project: American Linen
Project No: 1413-001-02-501B

IGL ID:- 18

IGL File No: 49143
Sample ID: MW-322-32
Depth, ft: 32

COMBINED SIEVE + LASER DIFFRACTION DATA



Dry Sieve Data						Laser Diffraction (LPSA) Data					
Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer	Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer
Inches	Millimeters					Inches	Millimeters				
2.95	75.0	-6.23	3"	0.00	100.00	0.250	6.351	-2.67	1/4	0.00	100.00
1.97	50.0	-5.64	2"	0.00	100.00	0.187	4.757	-2.25	4	0.00	100.00
1.48	37.5	-5.23	1-1/2"	0.00	100.00	0.132	3.364	-1.75	6	0.00	100.00
0.984	25.0	-4.64	1	0.00	100.00	0.079	2.000	-1.00	10	0.00	100.00
0.492	12.5	-3.64	1/2	1.84	98.16	0.047	1.189	-0.25	16	0.00	100.00
0.374	9.50	-3.25	3/8	3.17	96.83	0.033	0.841	0.25	20	0.00	100.00
0.250	6.35	-2.67	1/4	5.16	94.84	0.028	0.707	0.50	25	0.00	100.00
0.187	4.76	-2.25	4	6.90	93.10	0.023	0.595	0.75	30	0.00	100.00
0.132	3.36	-1.75	6	9.01	90.99	0.020	0.500	1.00	35	0.00	100.00
0.079	2.00	-1.00	10	12.51	87.49	0.017	0.420	1.25	40	0.00	100.00
0.056	1.414	-0.50	14	15.18	84.82	0.0139	0.3536	1.50	45	0.00	100.00
0.039	1.000	0.00	18	17.40	82.60	0.0117	0.2973	1.75	50	0.00	100.00
0.028	0.707	0.50	25	19.40	80.60	0.0098	0.2500	2.00	60	0.00	100.00
0.020	0.500	1.00	35	22.16	77.84	0.0083	0.2102	2.25	70	0.01	99.99
0.017	0.420	1.25	40	22.25	77.75	0.0070	0.1768	2.50	80	0.13	99.87
0.014	0.354	1.50	45	24.92	75.08	0.0059	0.1487	2.75	100	33.00	67.00
0.010	0.250	2.00	60	28.34	71.66	0.0049	0.1250	3.00	120	36.90	63.10
0.007	0.1768	2.50	80	32.23	67.77	0.0041	0.1051	3.25	140	37.97	62.03
0.005	0.1250	3.00	120	36.10	63.90	0.0035	0.0884	3.50	170	41.84	58.16
0.003	0.0743	3.75	200	41.90	58.10	0.0029	0.0743	3.75	200	42.25	57.75
0.002	0.0526	4.25	270	42.28	57.72	0.0025	0.0625	4.00	230	43.35	56.65
0.001	0.0372	4.75	400	42.28	57.72	0.0021	0.0526	4.25	270	44.76	55.24
			PAN	100	0.00	0.0017	0.0442	4.50	325	45.76	54.24
						0.0015	0.0372	4.75	400	46.00	54.00
						0.0012	0.0313	5.00	450	48.17	51.83
						0.0010	0.0250	5.32	500	51.71	48.29
						0.0008	0.0201	5.64	635	54.97	45.03
						0.0006	0.0156	6.00		57.84	42.16
						0.0004	0.0110	6.50		59.25	40.75
						0.0003	0.0078	7.00		61.25	38.75
						0.0002	0.0050	7.65		62.76	37.24
						0.00008	0.00195	9.00		69.68	30.32
						0.00004	0.00098	10.00		79.44	20.56
						0.00002	0.00049	11.00		92.35	7.65
						0.00001	0.00038	11.38		100.00	0.00

Client: PES Environmental, Inc., **IGL ID:-** 18 **IGL File No:** 49143
Project: American Linen **Sample ID:** MW-322-32
Project No: 1413-001-02-501B **Depth, ft:** 32

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA
 (Tabular Data plus Statistics)

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA						
Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1.00	0.0	100.0	0.0
0.492	12.5	-3.64	1/2	1.8	98.2	1.8
0.374	9.50	-3.25	3/8	1.3	96.8	3.2
0.250	6.35	-2.67	1/4	2.0	94.8	5.2
0.1873	4.76	-2.25	4	1.7	93.1	6.9
0.1324	3.364	-1.75	6	2.1	91.0	9.0
0.0787	2.000	-1.00	10	3.5	87.5	12.5
0.0557	1.414	-0.50	14	2.7	84.8	15.2
0.0394	1.000	0.00	18	2.2	82.6	17.4
0.0278	0.707	0.50	25	2.0	80.6	19.4
0.0197	0.500	1.00	35	2.8	77.8	22.2
0.01655	0.420	1.25	40	0.1	77.7	22.3
0.01392	0.354	1.50	45	2.7	75.1	24.9
0.00984	0.2500	2.00	60	3.4	71.7	28.3
0.00696	0.1768	2.50	80	3.9	67.8	32.2
0.00585	0.1487	2.75	100	3.9	63.9	36.1
0.00492	0.1250	3.00	120	0.8	63.1	36.9
0.00414	0.1051	3.25	140	1.1	62.0	38.0
0.00348	0.0884	3.50	170	3.9	58.2	41.8
0.00293	0.0743	3.75	200	0.4	57.8	42.3
0.00246	0.0625	4.00	230	1.1	56.7	43.4
0.00207	0.0526	4.25	270	1.4	55.2	44.8
0.00174	0.0442	4.50	325	1.0	54.2	45.8
0.00146	0.0372	4.75	400	0.2	54.0	46.0
0.00123	0.0313	5.00	450	2.2	51.8	48.2
0.00099	0.0250	5.32	500	3.5	48.3	51.7
0.00079	0.0201	5.64	635	3.3	45.0	55.0
0.00062	0.0156	6.00		2.9	42.2	57.8
0.00043	0.0110	6.50		1.4	40.8	59.3
0.00031	0.0078	7.00		2.0	38.8	61.3
0.00020	0.0050	7.65		1.5	37.2	62.8
0.00008	0.0020	9.00		6.9	30.3	69.7
0.00004	0.0010	10.00		9.8	20.6	79.4
0.00002	0.0005	11.00		12.9	7.6	92.4
0.00001	0.0004	11.38		7.6	0.0	100.0
TOTALS				100.0	100.0	100.0

COMBINED DATA STATISTICS			
Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-2.71	0.2582	6.559
10	-1.54	0.1143	2.902
16	-0.31	0.0490	1.244
25	1.51	0.0138	0.351
40	3.38	0.0038	0.096
50	5.17	0.0011	0.028
60	6.69	0.0004	0.010
75	9.55	0.0001	0.001
84	10.35	0.0000	0.001
90	10.82	0.0000	0.001
95	11.13	0.0000	0.000

Measure	Trask	Inman	Folk-Ward
Median, phi	5.17	5.17	5.17
Median, in.	0.0011	0.0011	0.0011
Median, mm	0.028	0.028	0.028
Mean, phi	2.51	5.02	5.07
Mean, in.	0.0069	0.0012	0.0012
Mean, mm	0.176	0.031	0.030
Sorting	16.186	5.334	4.765
Skewness	0.778	-0.027	-0.083
Kurtosis	0.060	0.298	0.706

Grain Size Description Silt
 (ASTM-USCS Scale) (based on Trask Median)

Description (ASTM-USCS Scale)	Retained on Sieve #	Weight Percent
Gravel	4	6.9
Coarse Sand	10	5.6
Medium Sand	40	9.7
Fine Sand	200	20.0
Silt	>0.005 mm	20.5
Clay	<0.005 mm	37.2
Total		100

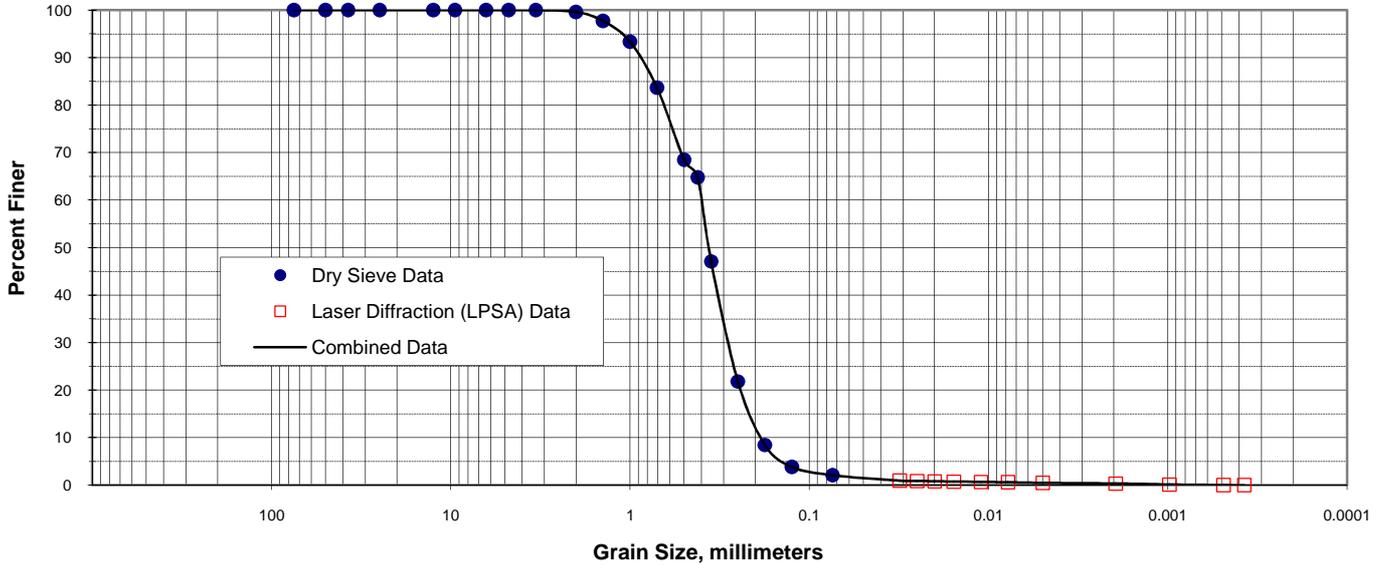
Notes: Dry sieve preparation was drying followed by pass/retained (wash) on 200 sieve.

Client: PES Environmental, Inc.,
Project: American Linen
Project No: 1413-001-02-501B

IGL ID:- 19

IGL File No: 49143
Sample ID: MW-329-70
Depth, ft: 70

COMBINED SIEVE + LASER DIFFRACTION DATA



Dry Sieve Data						Laser Diffraction (LPSA) Data					
Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer	Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer
Inches	Millimeters					Inches	Millimeters				
2.95	75.0	-6.23	3"	0.00	100.00	0.250	6.351	-2.67	1/4	0.00	100.00
1.97	50.0	-5.64	2"	0.00	100.00	0.187	4.757	-2.25	4	0.00	100.00
1.48	37.5	-5.23	1-1/2"	0.00	100.00	0.132	3.364	-1.75	6	0.00	100.00
0.984	25.0	-4.64	1	0.00	100.00	0.079	2.000	-1.00	10	0.00	100.00
0.492	12.5	-3.64	1/2	0.00	100.00	0.047	1.189	-0.25	16	0.00	100.00
0.374	9.50	-3.25	3/8	0.00	100.00	0.033	0.841	0.25	20	17.23	82.77
0.250	6.35	-2.67	1/4	0.00	100.00	0.028	0.707	0.50	25	32.96	67.04
0.187	4.76	-2.25	4	0.00	100.00	0.023	0.595	0.75	30	42.26	57.74
0.132	3.36	-1.75	6	0.00	100.00	0.020	0.500	1.00	35	52.27	47.73
0.079	2.00	-1.00	10	0.37	99.63	0.017	0.420	1.25	40	62.79	37.21
0.056	1.414	-0.50	14	2.28	97.72	0.0139	0.3536	1.50	45	72.91	27.09
0.039	1.000	0.00	18	6.65	93.35	0.0117	0.2973	1.75	50	80.42	19.58
0.028	0.707	0.50	25	16.33	83.67	0.0098	0.2500	2.00	60	88.54	11.46
0.020	0.500	1.00	35	31.51	68.49	0.0083	0.2102	2.25	70	93.17	6.83
0.017	0.420	1.25	40	35.20	64.80	0.0070	0.1768	2.50	80	95.92	4.08
0.014	0.354	1.50	45	52.84	47.16	0.0059	0.1487	2.75	100	97.38	2.62
0.010	0.250	2.00	60	78.10	21.90	0.0049	0.1250	3.00	120	98.09	1.91
0.007	0.1768	2.50	80	91.48	8.52	0.0041	0.1051	3.25	140	98.44	1.56
0.005	0.1250	3.00	120	96.14	3.86	0.0035	0.0884	3.50	170	98.63	1.37
0.003	0.0743	3.75	200	97.89	2.11	0.0029	0.0743	3.75	200	98.74	1.26
0.002	0.0526	4.25	270	97.94	2.06	0.0025	0.0625	4.00	230	98.81	1.19
0.001	0.0372	4.75	400	97.94	2.06	0.0021	0.0526	4.25	270	98.88	1.12
			PAN	100	0.00	0.0017	0.0442	4.50	325	98.93	1.07
						0.0015	0.0372	4.75	400	98.98	1.02
						0.0012	0.0313	5.00	450	99.03	0.97
						0.0010	0.0250	5.32	500	99.08	0.92
						0.0008	0.0201	5.64	635	99.14	0.86
						0.0006	0.0156	6.00		99.20	0.80
						0.0004	0.0110	6.50		99.27	0.73
						0.0003	0.0078	7.00		99.38	0.62
						0.0002	0.0050	7.65		99.50	0.50
						0.00008	0.00195	9.00		99.62	0.38
						0.00004	0.00098	10.00		99.83	0.17
						0.00002	0.00049	11.00		99.99	0.01
						0.00001	0.00038	11.38		100.00	0.00

Client: PES Environmental, Inc., **IGL ID:-** 19 **IGL File No:** 49143
Project: American Linen **Sample ID:** MW-329-70
Project No: 1413-001-02-501B **Depth, ft:** 70

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA

(Tabular Data plus Statistics)

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA						
Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1.00	0.0	100.0	0.0
0.492	12.5	-3.64	1/2	0.0	100.0	0.0
0.374	9.50	-3.25	3/8	0.0	100.0	0.0
0.250	6.35	-2.67	1/4	0.0	100.0	0.0
0.1873	4.76	-2.25	4	0.0	100.0	0.0
0.1324	3.364	-1.75	6	0.0	100.0	0.0
0.0787	2.000	-1.00	10	0.4	99.6	0.4
0.0557	1.414	-0.50	14	1.9	97.7	2.3
0.0394	1.000	0.00	18	4.4	93.3	6.7
0.0278	0.707	0.50	25	9.7	83.7	16.3
0.0197	0.500	1.00	35	15.2	68.5	31.5
0.01655	0.420	1.25	40	3.7	64.8	35.2
0.01392	0.354	1.50	45	17.6	47.2	52.8
0.00984	0.2500	2.00	60	25.3	21.9	78.1
0.00696	0.1768	2.50	80	13.4	8.5	91.5
0.00585	0.1487	2.75	100	5.9	2.6	97.4
0.00492	0.1250	3.00	120	0.7	1.9	98.1
0.00414	0.1051	3.25	140	0.4	1.6	98.4
0.00348	0.0884	3.50	170	0.2	1.4	98.6
0.00293	0.0743	3.75	200	0.1	1.3	98.7
0.00246	0.0625	4.00	230	0.1	1.2	98.8
0.00207	0.0526	4.25	270	0.1	1.1	98.9
0.00174	0.0442	4.50	325	0.1	1.1	98.9
0.00146	0.0372	4.75	400	0.1	1.0	99.0
0.00123	0.0313	5.00	450	0.0	1.0	99.0
0.00099	0.0250	5.32	500	0.0	0.9	99.1
0.00079	0.0201	5.64	635	0.1	0.9	99.1
0.00062	0.0156	6.00		0.1	0.8	99.2
0.00043	0.0110	6.50		0.1	0.7	99.3
0.00031	0.0078	7.00		0.1	0.6	99.4
0.00020	0.0050	7.65		0.1	0.5	99.5
0.00008	0.0020	9.00		0.1	0.4	99.6
0.00004	0.0010	10.00		0.2	0.2	99.8
0.00002	0.0005	11.00		0.2	0.0	100.0
0.00001	0.0004	11.38		0.0	0.0	100.0
TOTALS				100.0	100.0	100.0

COMBINED DATA STATISTICS			
Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-0.19	0.0449	1.140
10	0.17	0.0349	0.887
16	0.48	0.0282	0.716
25	0.79	0.0228	0.580
40	1.32	0.0158	0.401
50	1.46	0.0143	0.364
60	1.64	0.0126	0.320
75	1.94	0.0103	0.261
84	2.22	0.0084	0.215
90	2.44	0.0072	0.184
95	2.65	0.0063	0.159

Measure	Trask	Inman	Folk-Ward
Median, phi	1.46	1.46	1.46
Median, in.	0.0143	0.0143	0.0143
Median, mm	0.364	0.364	0.364
Mean, phi	1.25	1.35	1.39
Mean, in.	0.0166	0.0154	0.0150
Mean, mm	0.421	0.392	0.382
Sorting	1.491	0.869	0.864
Skewness	1.070	-0.125	-0.143
Kurtosis	0.227	0.633	1.009

Grain Size Description (ASTM-USCS Scale) Fine sand (based on Trask Median)

Description (ASTM-USCS Scale)	Retained on Sieve #	Weight Percent
Gravel	4	0.0
Coarse Sand	10	0.4
Medium Sand	40	34.8
Fine Sand	200	63.5
Silt	>0.005 mm	0.8
Clay	<0.005 mm	0.5
Total		100

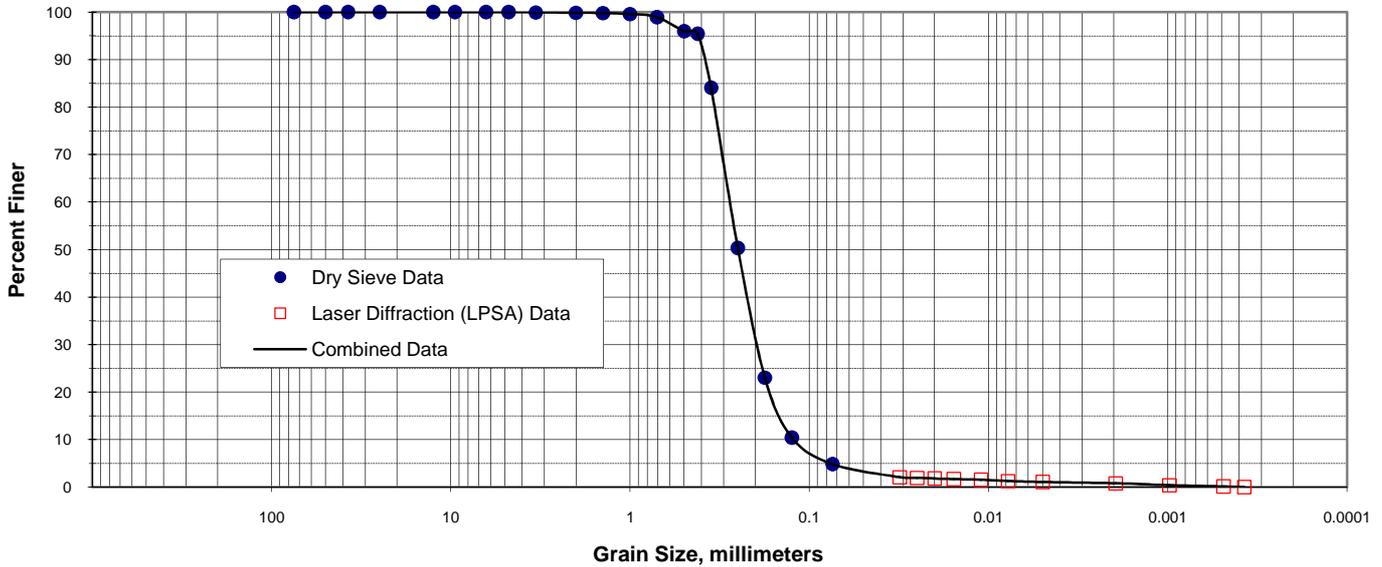
Notes: Dry sieve preparation was drying followed by pass/retained (wash) on 200 sieve.

Client: PES Environmental, Inc.,
Project: American Linen
Project No: 1413-001-02-501B

IGL ID:- 20

IGL File No: 49143
Sample ID: MW-328-70
Depth, ft: 70

COMBINED SIEVE + LASER DIFFRACTION DATA



Dry Sieve Data						Laser Diffraction (LPSA) Data					
Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer	Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer
Inches	Millimeters					Inches	Millimeters				
2.95	75.0	-6.23	3"	0.00	100.00	0.250	6.351	-2.67	1/4	0.00	100.00
1.97	50.0	-5.64	2"	0.00	100.00	0.187	4.757	-2.25	4	0.00	100.00
1.48	37.5	-5.23	1-1/2"	0.00	100.00	0.132	3.364	-1.75	6	0.00	100.00
0.984	25.0	-4.64	1	0.00	100.00	0.079	2.000	-1.00	10	0.00	100.00
0.492	12.5	-3.64	1/2	0.00	100.00	0.047	1.189	-0.25	16	0.00	100.00
0.374	9.50	-3.25	3/8	0.00	100.00	0.033	0.841	0.25	20	1.77	98.23
0.250	6.35	-2.67	1/4	0.00	100.00	0.028	0.707	0.50	25	4.02	95.98
0.187	4.76	-2.25	4	0.00	100.00	0.023	0.595	0.75	30	6.46	93.54
0.132	3.36	-1.75	6	0.01	99.99	0.020	0.500	1.00	35	10.91	89.09
0.079	2.00	-1.00	10	0.08	99.92	0.017	0.420	1.25	40	18.68	81.32
0.056	1.414	-0.50	14	0.15	99.85	0.0139	0.3536	1.50	45	30.07	69.93
0.039	1.000	0.00	18	0.34	99.66	0.0117	0.2973	1.75	50	41.67	58.33
0.028	0.707	0.50	25	1.04	98.96	0.0098	0.2500	2.00	60	58.86	41.14
0.020	0.500	1.00	35	4.04	95.96	0.0083	0.2102	2.25	70	72.05	27.95
0.017	0.420	1.25	40	4.55	95.45	0.0070	0.1768	2.50	80	82.15	17.85
0.014	0.354	1.50	45	15.89	84.11	0.0059	0.1487	2.75	100	88.76	11.24
0.010	0.250	2.00	60	49.65	50.35	0.0049	0.1250	3.00	120	92.54	7.46
0.007	0.1768	2.50	80	76.89	23.11	0.0041	0.1051	3.25	140	94.64	5.36
0.005	0.1250	3.00	120	89.55	10.45	0.0035	0.0884	3.50	170	95.83	4.17
0.003	0.0743	3.75	200	95.15	4.85	0.0029	0.0743	3.75	200	96.55	3.45
0.002	0.0526	4.25	270	95.39	4.61	0.0025	0.0625	4.00	230	97.01	2.99
0.001	0.0372	4.75	400	95.41	4.59	0.0021	0.0526	4.25	270	97.32	2.68
			PAN	100	0.00	0.0017	0.0442	4.50	325	97.54	2.46
						0.0015	0.0372	4.75	400	97.72	2.28
						0.0012	0.0313	5.00	450	97.87	2.13
						0.0010	0.0250	5.32	500	98.01	1.99
						0.0008	0.0201	5.64	635	98.16	1.84
						0.0006	0.0156	6.00		98.30	1.70
						0.0004	0.0110	6.50		98.46	1.54
						0.0003	0.0078	7.00		98.68	1.32
						0.0002	0.0050	7.65		98.90	1.10
						0.00008	0.00195	9.00		99.14	0.86
						0.00004	0.00098	10.00		99.54	0.46
						0.00002	0.00049	11.00		99.86	0.14
						0.00001	0.00038	11.38		100.00	0.00

Client: PES Environmental, Inc., **IGL ID:-** 20 **IGL File No:** 49143
Project: American Linen **Sample ID:** MW-328-70
Project No: 1413-001-02-501B **Depth, ft:** 70

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA

(Tabular Data plus Statistics)

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA						
Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1.00	0.0	100.0	0.0
0.492	12.5	-3.64	1/2	0.0	100.0	0.0
0.374	9.50	-3.25	3/8	0.0	100.0	0.0
0.250	6.35	-2.67	1/4	0.0	100.0	0.0
0.1873	4.76	-2.25	4	0.0	100.0	0.0
0.1324	3.364	-1.75	6	0.0	100.0	0.0
0.0787	2.000	-1.00	10	0.1	99.9	0.1
0.0557	1.414	-0.50	14	0.1	99.8	0.2
0.0394	1.000	0.00	18	0.2	99.7	0.3
0.0278	0.707	0.50	25	0.7	99.0	1.0
0.0197	0.500	1.00	35	3.0	96.0	4.0
0.01655	0.420	1.25	40	0.5	95.4	4.6
0.01392	0.354	1.50	45	11.3	84.1	15.9
0.00984	0.2500	2.00	60	33.8	50.4	49.6
0.00696	0.1768	2.50	80	27.2	23.1	76.9
0.00585	0.1487	2.75	100	11.9	11.2	88.8
0.00492	0.1250	3.00	120	3.8	7.5	92.5
0.00414	0.1051	3.25	140	2.1	5.4	94.6
0.00348	0.0884	3.50	170	1.2	4.2	95.8
0.00293	0.0743	3.75	200	0.7	3.4	96.6
0.00246	0.0625	4.00	230	0.5	3.0	97.0
0.00207	0.0526	4.25	270	0.3	2.7	97.3
0.00174	0.0442	4.50	325	0.2	2.5	97.5
0.00146	0.0372	4.75	400	0.2	2.3	97.7
0.00123	0.0313	5.00	450	0.1	2.1	97.9
0.00099	0.0250	5.32	500	0.1	2.0	98.0
0.00079	0.0201	5.64	635	0.1	1.8	98.2
0.00062	0.0156	6.00		0.1	1.7	98.3
0.00043	0.0110	6.50		0.2	1.5	98.5
0.00031	0.0078	7.00		0.2	1.3	98.7
0.00020	0.0050	7.65		0.2	1.1	98.9
0.00008	0.0020	9.00		0.2	0.9	99.1
0.00004	0.0010	10.00		0.4	0.5	99.5
0.00002	0.0005	11.00		0.3	0.1	99.9
0.00001	0.0004	11.38		0.1	0.0	100.0
TOTALS				100.0	100.0	100.0

COMBINED DATA STATISTICS			
Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	1.26	0.0164	0.418
10	1.37	0.0152	0.387
16	1.50	0.0139	0.353
25	1.63	0.0127	0.322
40	1.86	0.0109	0.276
50	2.01	0.0098	0.249
60	2.19	0.0086	0.219
75	2.47	0.0071	0.181
84	2.65	0.0063	0.159
90	2.83	0.0055	0.140
95	3.33	0.0039	0.100

Measure	Trask	Inman	Folk-Ward
Median, phi	2.01	2.01	2.01
Median, in.	0.0098	0.0098	0.0098
Median, mm	0.249	0.249	0.249
Mean, phi	1.99	2.08	2.05
Mean, in.	0.0099	0.0093	0.0095
Mean, mm	0.252	0.237	0.241
Sorting	1.333	0.574	0.600
Skewness	0.970	0.121	0.199
Kurtosis	0.286	0.799	1.019

Grain Size Description (ASTM-USCS Scale) Fine sand (based on Trask Median)

Description (ASTM-USCS Scale)	Retained on Sieve #	Weight Percent
Gravel	4	0.0
Coarse Sand	10	0.1
Medium Sand	40	4.5
Fine Sand	200	92.0
Silt	>0.005 mm	2.3
Clay	<0.005 mm	1.1
Total		100

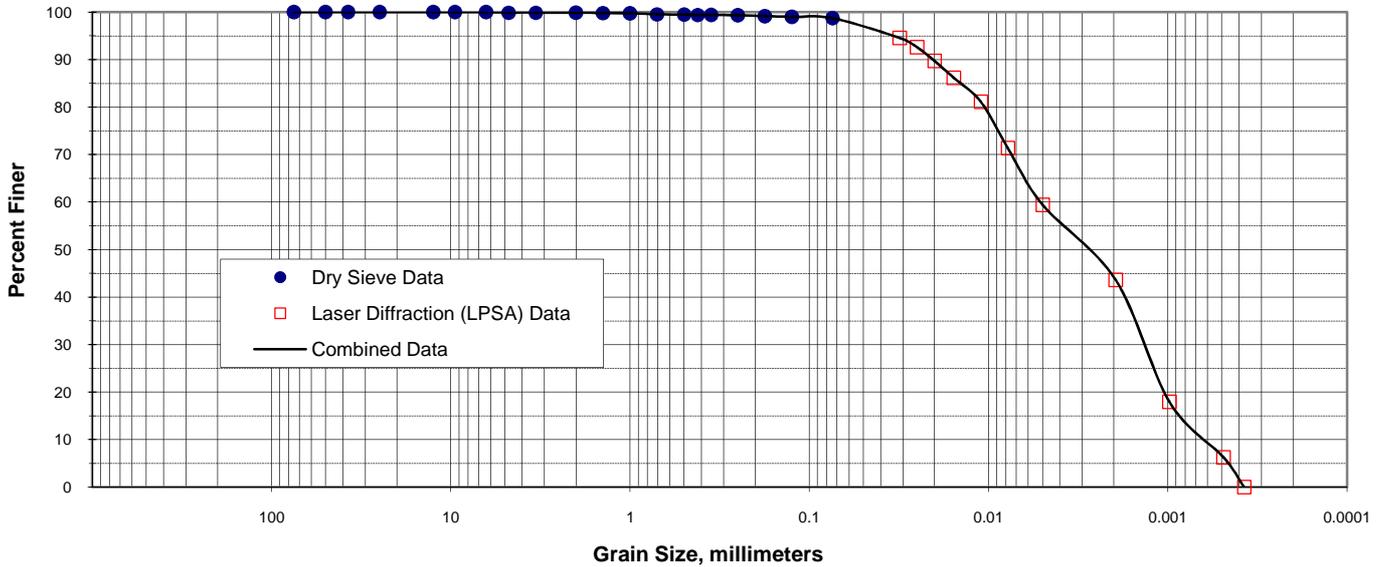
Notes: Dry sieve preparation was drying followed by pass/retained (wash) on 200 sieve.

Client: PES Environmental, Inc.,
Project: American Linen
Project No: 1413-001-02-501B

IGL ID:- 21

IGL File No: 49143
Sample ID: MW-304-81
Depth, ft: 81

COMBINED SIEVE + LASER DIFFRACTION DATA



Dry Sieve Data						Laser Diffraction (LPSA) Data					
Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer	Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer
Inches	Millimeters					Inches	Millimeters				
2.95	75.0	-6.23	3"	0.00	100.00	0.250	6.351	-2.67	1/4	0.00	100.00
1.97	50.0	-5.64	2"	0.00	100.00	0.187	4.757	-2.25	4	0.00	100.00
1.48	37.5	-5.23	1-1/2"	0.00	100.00	0.132	3.364	-1.75	6	0.00	100.00
0.984	25.0	-4.64	1	0.00	100.00	0.079	2.000	-1.00	10	0.00	100.00
0.492	12.5	-3.64	1/2	0.00	100.00	0.047	1.189	-0.25	16	0.00	100.00
0.374	9.50	-3.25	3/8	0.00	100.00	0.033	0.841	0.25	20	0.00	100.00
0.250	6.35	-2.67	1/4	0.00	100.00	0.028	0.707	0.50	25	0.00	100.00
0.187	4.76	-2.25	4	0.07	99.93	0.023	0.595	0.75	30	0.00	100.00
0.132	3.36	-1.75	6	0.07	99.93	0.020	0.500	1.00	35	0.00	100.00
0.079	2.00	-1.00	10	0.10	99.90	0.017	0.420	1.25	40	0.00	100.00
0.056	1.414	-0.50	14	0.16	99.84	0.0139	0.3536	1.50	45	0.00	100.00
0.039	1.000	0.00	18	0.26	99.74	0.0117	0.2973	1.75	50	0.00	100.00
0.028	0.707	0.50	25	0.41	99.59	0.0098	0.2500	2.00	60	0.00	100.00
0.020	0.500	1.00	35	0.53	99.47	0.0083	0.2102	2.25	70	0.00	100.00
0.017	0.420	1.25	40	0.54	99.46	0.0070	0.1768	2.50	80	0.00	100.00
0.014	0.354	1.50	45	0.57	99.43	0.0059	0.1487	2.75	100	0.00	100.00
0.010	0.250	2.00	60	0.67	99.33	0.0049	0.1250	3.00	120	1.00	99.00
0.007	0.1768	2.50	80	0.85	99.15	0.0041	0.1051	3.25	140	1.10	98.90
0.005	0.1250	3.00	120	1.00	99.00	0.0035	0.0884	3.50	170	1.20	98.80
0.003	0.0743	3.75	200	1.25	98.75	0.0029	0.0743	3.75	200	1.25	98.75
0.002	0.0526	4.25	270	1.27	98.73	0.0025	0.0625	4.00	230	1.30	98.70
0.001	0.0372	4.75	400	1.28	98.72	0.0021	0.0526	4.25	270	1.56	98.44
			PAN	100	0.00	0.0017	0.0442	4.50	325	2.58	97.42
						0.0015	0.0372	4.75	400	3.84	96.16
						0.0012	0.0313	5.00	450	5.42	94.58
						0.0010	0.0250	5.32	500	7.35	92.65
						0.0008	0.0201	5.64	635	10.27	89.73
						0.0006	0.0156	6.00		13.82	86.18
						0.0004	0.0110	6.50		18.85	81.15
						0.0003	0.0078	7.00		28.59	71.41
						0.0002	0.0050	7.65		40.57	59.43
						0.00008	0.00195	9.00		56.38	43.62
						0.00004	0.00098	10.00		82.06	17.94
						0.00002	0.00049	11.00		93.74	6.26
						0.00001	0.00038	11.38		100.00	0.00

Client: PES Environmental, Inc., IGL ID:- 21 IGL File No: 49143
 Project: American Linen Sample ID: MW-304-81
 Project No: 1413-001-02-501B Depth, ft: 81

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA
 (Tabular Data plus Statistics)

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA						
Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1.00	0.0	100.0	0.0
0.492	12.5	-3.64	1/2	0.0	100.0	0.0
0.374	9.50	-3.25	3/8	0.0	100.0	0.0
0.250	6.35	-2.67	1/4	0.0	100.0	0.0
0.1873	4.76	-2.25	4	0.1	99.9	0.1
0.1324	3.364	-1.75	6	0.0	99.9	0.1
0.0787	2.000	-1.00	10	0.0	99.9	0.1
0.0557	1.414	-0.50	14	0.1	99.8	0.2
0.0394	1.000	0.00	18	0.1	99.7	0.3
0.0278	0.707	0.50	25	0.1	99.6	0.4
0.0197	0.500	1.00	35	0.1	99.5	0.5
0.01655	0.420	1.25	40	0.0	99.5	0.5
0.01392	0.354	1.50	45	0.0	99.4	0.6
0.00984	0.2500	2.00	60	0.1	99.3	0.7
0.00696	0.1768	2.50	80	0.2	99.2	0.8
0.00585	0.1487	2.75	100	0.2	99.0	1.0
0.00492	0.1250	3.00	120	0.0	99.0	1.0
0.00414	0.1051	3.25	140	0.1	98.9	1.1
0.00348	0.0884	3.50	170	0.1	98.8	1.2
0.00293	0.0743	3.75	200	0.0	98.8	1.3
0.00246	0.0625	4.00	230	0.0	98.7	1.3
0.00207	0.0526	4.25	270	0.3	98.4	1.6
0.00174	0.0442	4.50	325	1.0	97.4	2.6
0.00146	0.0372	4.75	400	1.3	96.2	3.8
0.00123	0.0313	5.00	450	1.6	94.6	5.4
0.00099	0.0250	5.32	500	1.9	92.6	7.4
0.00079	0.0201	5.64	635	2.9	89.7	10.3
0.00062	0.0156	6.00		3.5	86.2	13.8
0.00043	0.0110	6.50		5.0	81.1	18.9
0.00031	0.0078	7.00		9.7	71.4	28.6
0.00020	0.0050	7.65		12.0	59.4	40.6
0.00008	0.0020	9.00		15.8	43.6	56.4
0.00004	0.0010	10.00		25.7	17.9	82.1
0.00002	0.0005	11.00		11.7	6.3	93.7
0.00001	0.0004	11.38		6.3	0.0	100.0
TOTALS				100.0	100.0	

COMBINED DATA STATISTICS			
Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	4.93	0.0013	0.033
10	5.61	0.0008	0.020
16	6.22	0.0005	0.013
25	6.82	0.0003	0.009
40	7.61	0.0002	0.005
50	8.45	0.0001	0.003
60	9.14	0.0001	0.002
75	9.73	0.0000	0.001
84	10.17	0.0000	0.001
90	10.68	0.0000	0.001
95	11.08	0.0000	0.000

Measure	Trask	Inman	Folk-Ward
Median, phi	8.45	8.45	8.45
Median, in.	0.0001	0.0001	0.0001
Median, mm	0.003	0.003	0.003
Mean, phi	7.64	8.19	8.28
Mean, in.	0.0002	0.0001	0.0001
Mean, mm	0.005	0.003	0.003
Sorting	2.741	1.975	1.918
Skewness	1.135	-0.132	-0.139
Kurtosis	0.194	0.555	0.865
Grain Size Description (ASTM-USCS Scale)	Clay (based on Trask Median)		

Description (ASTM-USCS Scale)	Retained on Sieve #	Weight Percent
Gravel	4	0.1
Coarse Sand	10	0.0
Medium Sand	40	0.4
Fine Sand	200	0.7
Silt	>0.005 mm	39.3
Clay	<0.005 mm	59.4
Total		100

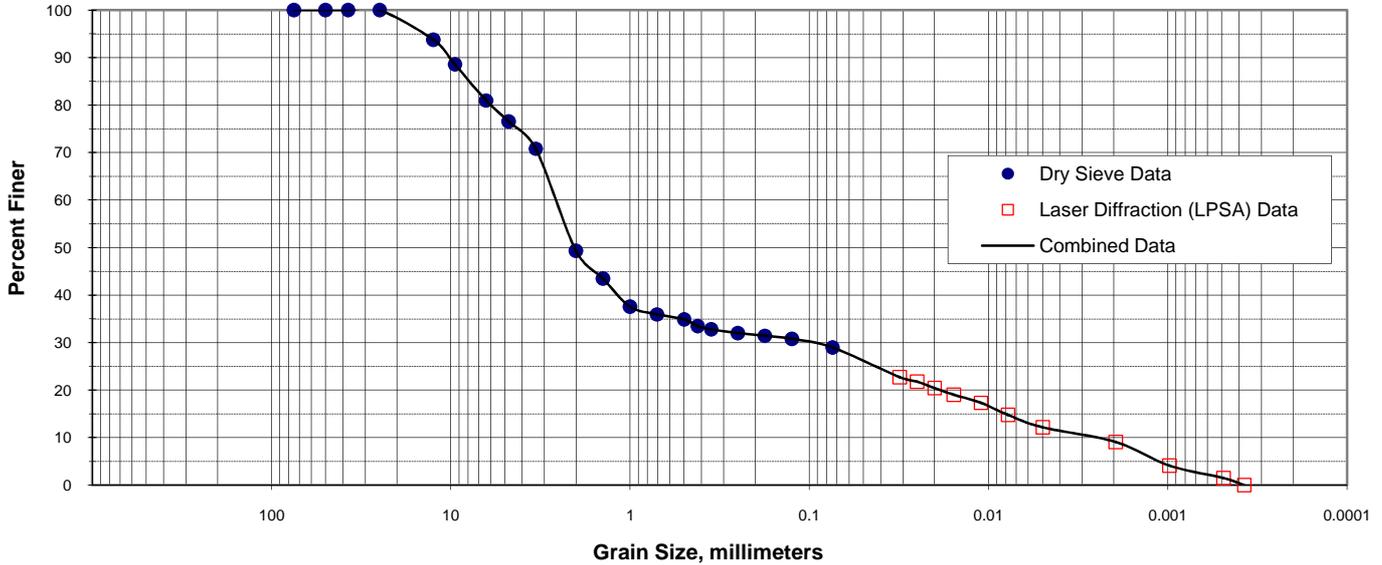
Notes: Dry sieve preparation was drying followed by pass/retained (wash) on 200 sieve.

Client: PES Environmental, Inc.,
Project: American Linen
Project No: 1413-001-02-501B

IGL ID:- 22

IGL File No: 49143
Sample ID: MW-329-105
Depth, ft: 105

COMBINED SIEVE + LASER DIFFRACTION DATA



Dry Sieve Data						Laser Diffraction (LPSA) Data					
Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer	Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer
Inches	Millimeters					Inches	Millimeters				
2.95	75.0	-6.23	3"	0.00	100.00	0.250	6.351	-2.67	1/4	0.00	100.00
1.97	50.0	-5.64	2"	0.00	100.00	0.187	4.757	-2.25	4	0.00	100.00
1.48	37.5	-5.23	1-1/2"	0.00	100.00	0.132	3.364	-1.75	6	0.00	100.00
0.984	25.0	-4.64	1	0.00	100.00	0.079	2.000	-1.00	10	0.00	100.00
0.492	12.5	-3.64	1/2	6.22	93.78	0.047	1.189	-0.25	16	0.00	100.00
0.374	9.50	-3.25	3/8	11.40	88.60	0.033	0.841	0.25	20	25.36	74.64
0.250	6.35	-2.67	1/4	18.97	81.03	0.028	0.707	0.50	25	42.49	57.51
0.187	4.76	-2.25	4	23.45	76.55	0.023	0.595	0.75	30	49.18	50.82
0.132	3.36	-1.75	6	29.12	70.88	0.020	0.500	1.00	35	54.53	45.47
0.079	2.00	-1.00	10	50.66	49.34	0.017	0.420	1.25	40	58.92	41.08
0.056	1.414	-0.50	14	56.52	43.48	0.0139	0.3536	1.50	45	62.51	37.49
0.039	1.000	0.00	18	62.40	37.60	0.0117	0.2973	1.75	50	64.89	35.11
0.028	0.707	0.50	25	64.00	36.00	0.0098	0.2500	2.00	60	67.35	32.65
0.020	0.500	1.00	35	65.10	34.90	0.0083	0.2102	2.25	70	68.85	31.15
0.017	0.420	1.25	40	66.50	33.50	0.0070	0.1768	2.50	80	69.97	30.01
0.014	0.354	1.50	45	67.20	32.80	0.0059	0.1487	2.75	100	70.91	29.09
0.010	0.250	2.00	60	68.00	32.00	0.0049	0.1250	3.00	120	71.67	28.33
0.007	0.1768	2.50	80	68.50	31.50	0.0041	0.1051	3.25	140	72.34	27.66
0.005	0.1250	3.00	120	69.20	30.80	0.0035	0.0884	3.50	170	72.96	27.04
0.003	0.0743	3.75	200	71.00	29.00	0.0029	0.0743	3.75	200	73.57	26.43
0.002	0.0526	4.25	270	90.84	9.16	0.0025	0.0625	4.00	230	74.21	25.79
0.001	0.0372	4.75	400	90.84	9.16	0.0021	0.0526	4.25	270	74.88	25.12
			PAN	100	0.00	0.0017	0.0442	4.50	325	75.60	24.40
						0.0015	0.0372	4.75	400	76.39	23.61
						0.0012	0.0313	5.00	450	77.27	22.73
						0.0010	0.0250	5.32	500	78.23	21.77
						0.0008	0.0201	5.64	635	79.54	20.46
						0.0006	0.0156	6.00		80.95	19.05
						0.0004	0.0110	6.50		82.62	17.38
						0.0003	0.0078	7.00		85.19	14.81
						0.0002	0.0050	7.65		87.80	12.20
						0.00008	0.00195	9.00		90.91	9.09
						0.00004	0.00098	10.00		95.88	4.12
						0.00002	0.00049	11.00		98.49	1.51
						0.00001	0.00038	11.38		100.00	0.00

Client: PES Environmental, Inc., **IGL ID:-** 22 **IGL File No:** 49143
Project: American Linen **Sample ID:** MW-329-105
Project No: 1413-001-02-501B **Depth, ft:** 105

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA

(Tabular Data plus Statistics)

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA						
Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1.00	0.0	100.0	0.0
0.492	12.5	-3.64	1/2	6.2	93.8	6.2
0.374	9.50	-3.25	3/8	5.2	88.6	11.4
0.250	6.35	-2.67	1/4	7.6	81.0	19.0
0.1873	4.76	-2.25	4	4.5	76.6	23.4
0.1324	3.364	-1.75	6	5.7	70.9	29.1
0.0787	2.000	-1.00	10	21.5	49.3	50.7
0.0557	1.414	-0.50	14	5.9	43.5	56.5
0.0394	1.000	0.00	18	5.9	37.6	62.4
0.0278	0.707	0.50	25	1.6	36.0	64.0
0.0197	0.500	1.00	35	1.1	34.9	65.1
0.01655	0.420	1.25	40	1.4	33.5	66.5
0.01392	0.354	1.50	45	0.7	32.8	67.2
0.00984	0.2500	2.00	60	0.8	32.0	68.0
0.00696	0.1768	2.50	80	2.0	30.0	70.0
0.00585	0.1487	2.75	100	0.9	29.1	70.9
0.00492	0.1250	3.00	120	0.8	28.3	71.7
0.00414	0.1051	3.25	140	0.7	27.7	72.3
0.00348	0.0884	3.50	170	0.6	27.0	73.0
0.00293	0.0743	3.75	200	0.6	26.4	73.6
0.00246	0.0625	4.00	230	0.6	25.8	74.2
0.00207	0.0526	4.25	270	0.7	25.1	74.9
0.00174	0.0442	4.50	325	0.7	24.4	75.6
0.00146	0.0372	4.75	400	0.8	23.6	76.4
0.00123	0.0313	5.00	450	0.9	22.7	77.3
0.00099	0.0250	5.32	500	1.0	21.8	78.2
0.00079	0.0201	5.64	635	1.3	20.5	79.5
0.00062	0.0156	6.00		1.4	19.1	80.9
0.00043	0.0110	6.50		1.7	17.4	82.6
0.00031	0.0078	7.00		2.6	14.8	85.2
0.00020	0.0050	7.65		2.6	12.2	87.8
0.00008	0.0020	9.00		3.1	9.1	90.9
0.00004	0.0010	10.00		5.0	4.1	95.9
0.00002	0.0005	11.00		2.6	1.5	98.5
0.00001	0.0004	11.38		1.5	0.0	100.0
TOTALS				100.0	100.0	100.0

COMBINED DATA STATISTICS			
Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-3.84	0.5641	14.328
10	-3.36	0.4029	10.234
16	-2.89	0.2928	7.437
25	-2.11	0.1704	4.327
40	-1.37	0.1018	2.587
50	-1.02	0.0800	2.032
60	-0.20	0.0454	1.152
75	4.29	0.0020	0.051
84	6.77	0.0004	0.009
90	8.60	0.0001	0.003
95	9.82	0.0000	0.001

Measure	Trask	Inman	Folk-Ward
Median, phi	-1.02	-1.02	-1.02
Median, in.	0.0800	0.0800	0.0800
Median, mm	2.032	2.032	2.032
Mean, phi	-1.13	1.94	0.95
Mean, in.	0.0862	0.0103	0.0204
Mean, mm	2.189	0.261	0.518
Sorting	9.202	4.832	4.486
Skewness	0.231	0.613	0.600
Kurtosis	0.209	0.414	0.874
Grain Size Description (ASTM-USCS Scale)	Coarse sand (based on Trask Median)		

Description (ASTM-USCS Scale)	Retained on Sieve #	Weight Percent
Gravel	4	23.4
Coarse Sand	10	27.2
Medium Sand	40	15.8
Fine Sand	200	7.1
Silt	>0.005 mm	14.2
Clay	<0.005 mm	12.2
Total		100

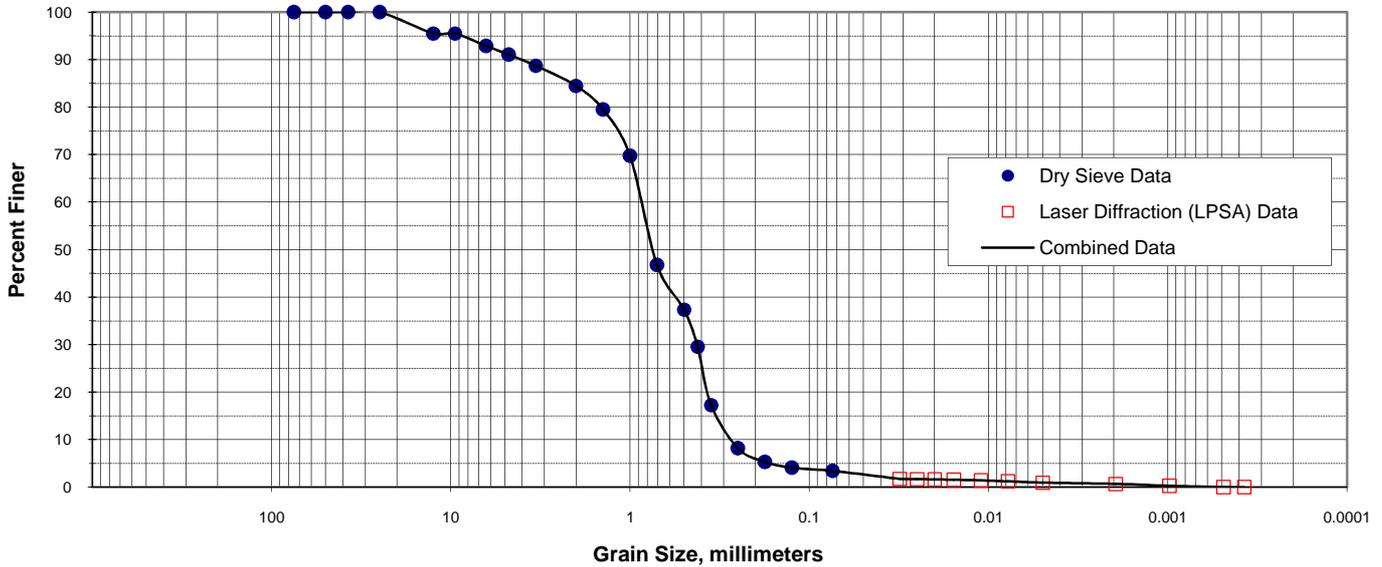
Notes: Dry sieve preparation was drying followed by pass/retained (wash) on 200 sieve.

Client: PES Environmental, Inc.,
Project: American Linen
Project No: 1413-001-02-501B

IGL ID:- 23

IGL File No: 49143
Sample ID: MW-304-108
Depth, ft: 108

COMBINED SIEVE + LASER DIFFRACTION DATA



Dry Sieve Data						Laser Diffraction (LPSA) Data					
Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer	Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer
Inches	Millimeters					Inches	Millimeters				
2.95	75.0	-6.23	3"	0.00	100.00	0.250	6.351	-2.67	1/4	0.00	100.00
1.97	50.0	-5.64	2"	0.00	100.00	0.187	4.757	-2.25	4	0.00	100.00
1.48	37.5	-5.23	1-1/2"	0.00	100.00	0.132	3.364	-1.75	6	0.00	100.00
0.984	25.0	-4.64	1	0.00	100.00	0.079	2.000	-1.00	10	0.00	100.00
0.492	12.5	-3.64	1/2	4.45	95.55	0.047	1.189	-0.25	16	0.00	100.00
0.374	9.50	-3.25	3/8	4.45	95.55	0.033	0.841	0.25	20	28.86	71.14
0.250	6.35	-2.67	1/4	7.11	92.89	0.028	0.707	0.50	25	57.22	42.78
0.187	4.76	-2.25	4	8.91	91.09	0.023	0.595	0.75	30	70.10	29.90
0.132	3.36	-1.75	6	11.23	88.77	0.020	0.500	1.00	35	80.29	19.71
0.079	2.00	-1.00	10	15.47	84.53	0.017	0.420	1.25	40	87.45	12.55
0.056	1.414	-0.50	14	20.47	79.53	0.0139	0.3536	1.50	45	92.09	7.91
0.039	1.000	0.00	18	30.24	69.76	0.0117	0.2973	1.75	50	94.51	5.49
0.028	0.707	0.50	25	53.20	46.80	0.0098	0.2500	2.00	60	96.34	3.66
0.020	0.500	1.00	35	62.59	37.41	0.0083	0.2102	2.25	70	97.09	2.91
0.017	0.420	1.25	40	70.37	29.63	0.0070	0.1768	2.50	80	97.46	2.54
0.014	0.354	1.50	45	82.67	17.33	0.0059	0.1487	2.75	100	97.66	2.34
0.010	0.250	2.00	60	91.78	8.22	0.0049	0.1250	3.00	120	97.79	2.21
0.007	0.1768	2.50	80	94.67	5.33	0.0041	0.1051	3.25	140	97.87	2.13
0.005	0.1250	3.00	120	95.87	4.13	0.0035	0.0884	3.50	170	97.92	2.08
0.003	0.0743	3.75	200	96.56	3.44	0.0029	0.0743	3.75	200	97.97	2.03
0.002	0.0526	4.25	270	96.61	3.39	0.0025	0.0625	4.00	230	98.01	1.99
0.001	0.0372	4.75	400	96.62	3.38	0.0021	0.0526	4.25	270	98.06	1.94
			PAN	100	0.00	0.0017	0.0442	4.50	325	98.11	1.89
						0.0015	0.0372	4.75	400	98.16	1.84
						0.0012	0.0313	5.00	450	98.21	1.79
						0.0010	0.0250	5.32	500	98.27	1.73
						0.0008	0.0201	5.64	635	98.36	1.64
						0.0006	0.0156	6.00		98.45	1.55
						0.0004	0.0110	6.50		98.57	1.43
						0.0003	0.0078	7.00		98.77	1.23
						0.0002	0.0050	7.65		99.00	1.00
						0.00008	0.00195	9.00		99.28	0.72
						0.00004	0.00098	10.00		99.73	0.27
						0.00002	0.00049	11.00		99.98	0.02
						0.00001	0.00038	11.38		100.00	0.00

Client: PES Environmental, Inc., **IGL ID:-** 23 **IGL File No:** 49143
Project: American Linen **Sample ID:** MW-304-108
Project No: 1413-001-02-501B **Depth, ft:** 108

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA

(Tabular Data plus Statistics)

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA						
Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1.00	0.0	100.0	0.0
0.492	12.5	-3.64	1/2	4.4	95.6	4.4
0.374	9.50	-3.25	3/8	0.0	95.6	4.4
0.250	6.35	-2.67	1/4	2.7	92.9	7.1
0.1873	4.76	-2.25	4	1.8	91.1	8.9
0.1324	3.364	-1.75	6	2.3	88.8	11.2
0.0787	2.000	-1.00	10	4.2	84.5	15.5
0.0557	1.414	-0.50	14	5.0	79.5	20.5
0.0394	1.000	0.00	18	9.8	69.8	30.2
0.0278	0.707	0.50	25	23.0	46.8	53.2
0.0197	0.500	1.00	35	9.4	37.4	62.6
0.01655	0.420	1.25	40	7.8	29.6	70.4
0.01392	0.354	1.50	45	12.3	17.3	82.7
0.00984	0.2500	2.00	60	9.1	8.2	91.8
0.00696	0.1768	2.50	80	2.9	5.3	94.7
0.00585	0.1487	2.75	100	3.0	2.3	97.7
0.00492	0.1250	3.00	120	0.1	2.2	97.8
0.00414	0.1051	3.25	140	0.1	2.1	97.9
0.00348	0.0884	3.50	170	0.0	2.1	97.9
0.00293	0.0743	3.75	200	0.0	2.0	98.0
0.00246	0.0625	4.00	230	0.0	2.0	98.0
0.00207	0.0526	4.25	270	0.0	1.9	98.1
0.00174	0.0442	4.50	325	0.0	1.9	98.1
0.00146	0.0372	4.75	400	0.0	1.8	98.2
0.00123	0.0313	5.00	450	0.1	1.8	98.2
0.00099	0.0250	5.32	500	0.1	1.7	98.3
0.00079	0.0201	5.64	635	0.1	1.6	98.4
0.00062	0.0156	6.00		0.1	1.5	98.5
0.00043	0.0110	6.50		0.1	1.4	98.6
0.00031	0.0078	7.00		0.2	1.2	98.8
0.00020	0.0050	7.65		0.2	1.0	99.0
0.00008	0.0020	9.00		0.3	0.7	99.3
0.00004	0.0010	10.00		0.4	0.3	99.7
0.00002	0.0005	11.00		0.2	0.0	100.0
0.00001	0.0004	11.38		0.0	0.0	100.0
TOTALS				100.0		100.0

COMBINED DATA STATISTICS			
Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-3.13	0.3440	8.738
10	-2.01	0.1591	4.042
16	-0.95	0.0759	1.928
25	-0.27	0.0474	1.204
40	0.21	0.0340	0.863
50	0.43	0.0292	0.742
60	0.86	0.0217	0.550
75	1.34	0.0155	0.394
84	1.57	0.0132	0.336
90	1.90	0.0105	0.268
95	2.53	0.0068	0.173

Measure	Trask	Inman	Folk-Ward
Median, phi	0.43	0.43	0.43
Median, in.	0.0292	0.0292	0.0292
Median, mm	0.742	0.742	0.742
Mean, phi	0.32	0.31	0.35
Mean, in.	0.0315	0.0317	0.0308
Mean, mm	0.799	0.805	0.783
Sorting	1.749	1.260	1.487
Skewness	0.928	-0.093	-0.176
Kurtosis	0.107	1.244	1.437

Grain Size Description Medium sand
 (ASTM-USCS Scale) (based on Trask Median)

Description (ASTM-USCS Scale)	Retained on Sieve #	Weight Percent
Gravel	4	8.9
Coarse Sand	10	6.6
Medium Sand	40	54.9
Fine Sand	200	27.6
Silt	>0.005 mm	1.0
Clay	<0.005 mm	1.0
Total		100

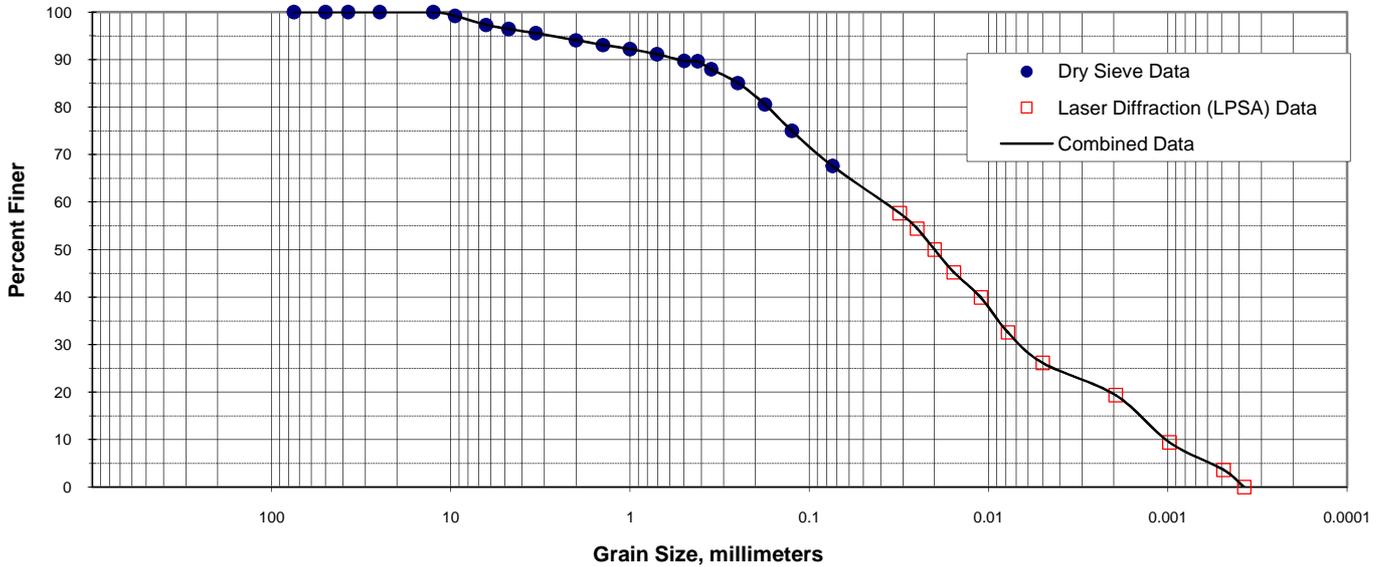
Notes: Dry sieve preparation was drying followed by pass/retained (wash) on 200 sieve.

Client: PES Environmental, Inc.,
Project: American Linen
Project No: 1413-001-02-501B

IGL ID:- 24

IGL File No: 49143
Sample ID: MW-324-38
Depth, ft: 38

COMBINED SIEVE + LASER DIFFRACTION DATA



Dry Sieve Data						Laser Diffraction (LPSA) Data					
Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer	Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer
Inches	Millimeters					Inches	Millimeters				
2.95	75.0	-6.23	3"	0.00	100.00	0.250	6.351	-2.67	1/4	0.00	100.00
1.97	50.0	-5.64	2"	0.00	100.00	0.187	4.757	-2.25	4	0.00	100.00
1.48	37.5	-5.23	1-1/2"	0.00	100.00	0.132	3.364	-1.75	6	0.00	100.00
0.984	25.0	-4.64	1	0.00	100.00	0.079	2.000	-1.00	10	0.00	100.00
0.492	12.5	-3.64	1/2	0.00	100.00	0.047	1.189	-0.25	16	0.00	100.00
0.374	9.50	-3.25	3/8	0.78	99.22	0.033	0.841	0.25	20	0.00	100.00
0.250	6.35	-2.67	1/4	2.64	97.36	0.028	0.707	0.50	25	0.22	99.78
0.187	4.76	-2.25	4	3.52	96.48	0.023	0.595	0.75	30	1.33	98.67
0.132	3.36	-1.75	6	4.44	95.56	0.020	0.500	1.00	35	2.98	97.02
0.079	2.00	-1.00	10	5.86	94.14	0.017	0.420	1.25	40	4.64	95.36
0.056	1.414	-0.50	14	6.86	93.14	0.0139	0.3536	1.50	45	6.30	93.70
0.039	1.000	0.00	18	7.80	92.20	0.0117	0.2973	1.75	50	7.70	92.30
0.028	0.707	0.50	25	8.87	91.13	0.0098	0.2500	2.00	60	9.81	90.19
0.020	0.500	1.00	35	10.26	89.74	0.0083	0.2102	2.25	70	11.99	88.01
0.017	0.420	1.25	40	10.33	89.67	0.0070	0.1768	2.50	80	14.71	85.29
0.014	0.354	1.50	45	12.03	87.97	0.0059	0.1487	2.75	100	21.20	78.80
0.010	0.250	2.00	60	14.86	85.14	0.0049	0.1250	3.00	120	21.41	78.59
0.007	0.1768	2.50	80	19.37	80.63	0.0041	0.1051	3.25	140	24.76	75.24
0.005	0.1250	3.00	120	25.00	75.00	0.0035	0.0884	3.50	170	27.80	72.20
0.003	0.0743	3.75	200	32.37	67.63	0.0029	0.0743	3.75	200	30.48	69.52
0.002	0.0526	4.25	270	32.80	67.20	0.0025	0.0625	4.00	230	32.86	67.14
0.001	0.0372	4.75	400	32.81	67.19	0.0021	0.0526	4.25	270	35.05	64.95
			PAN	100	0.00	0.0017	0.0442	4.50	325	37.21	62.79
						0.0015	0.0372	4.75	400	39.58	60.42
						0.0012	0.0313	5.00	450	42.33	57.67
						0.0010	0.0250	5.32	500	45.51	54.49
						0.0008	0.0201	5.64	635	49.97	50.03
						0.0006	0.0156	6.00		54.72	45.28
						0.0004	0.0110	6.50		60.09	39.91
						0.0003	0.0078	7.00		67.35	32.65
						0.0002	0.0050	7.65		73.82	26.18
						0.00008	0.00195	9.00		80.63	19.37
						0.00004	0.00098	10.00		90.57	9.43
						0.00002	0.00049	11.00		96.32	3.68
						0.00001	0.00038	11.38		100.00	0.00

Client: PES Environmental, Inc., **IGL ID:-** 24 **IGL File No:** 49143
Project: American Linen **Sample ID:** MW-324-38
Project No: 1413-001-02-501B **Depth, ft:** 38

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA

(Tabular Data plus Statistics)

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA						
Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1.00	0.0	100.0	0.0
0.492	12.5	-3.64	1/2	0.0	100.0	0.0
0.374	9.50	-3.25	3/8	0.8	99.2	0.8
0.250	6.35	-2.67	1/4	1.9	97.4	2.6
0.1873	4.76	-2.25	4	0.9	96.5	3.5
0.1324	3.364	-1.75	6	0.9	95.6	4.4
0.0787	2.000	-1.00	10	1.4	94.1	5.9
0.0557	1.414	-0.50	14	1.0	93.1	6.9
0.0394	1.000	0.00	18	0.9	92.2	7.8
0.0278	0.707	0.50	25	1.1	91.1	8.9
0.0197	0.500	1.00	35	1.4	89.7	10.3
0.01655	0.420	1.25	40	0.1	89.7	10.3
0.01392	0.354	1.50	45	1.7	88.0	12.0
0.00984	0.2500	2.00	60	2.8	85.1	14.9
0.00696	0.1768	2.50	80	4.5	80.6	19.4
0.00585	0.1487	2.75	100	1.8	78.8	21.2
0.00492	0.1250	3.00	120	0.2	78.6	21.4
0.00414	0.1051	3.25	140	3.4	75.2	24.8
0.00348	0.0884	3.50	170	3.0	72.2	27.8
0.00293	0.0743	3.75	200	2.7	69.5	30.5
0.00246	0.0625	4.00	230	2.4	67.1	32.9
0.00207	0.0526	4.25	270	2.2	64.9	35.1
0.00174	0.0442	4.50	325	2.2	62.8	37.2
0.00146	0.0372	4.75	400	2.4	60.4	39.6
0.00123	0.0313	5.00	450	2.8	57.7	42.3
0.00099	0.0250	5.32	500	3.2	54.5	45.5
0.00079	0.0201	5.64	635	4.5	50.0	50.0
0.00062	0.0156	6.00		4.7	45.3	54.7
0.00043	0.0110	6.50		5.4	39.9	60.1
0.00031	0.0078	7.00		7.3	32.7	67.3
0.00020	0.0050	7.65		6.5	26.2	73.8
0.00008	0.0020	9.00		6.8	19.4	80.6
0.00004	0.0010	10.00		9.9	9.4	90.6
0.00002	0.0005	11.00		5.8	3.7	96.3
0.00001	0.0004	11.38		3.7	0.0	100.0
TOTALS				100.0	100.0	

COMBINED DATA STATISTICS			
Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-1.45	0.1078	2.739
10	0.91	0.0210	0.534
16	2.13	0.0090	0.229
25	3.27	0.0041	0.104
40	4.79	0.0014	0.036
50	5.64	0.0008	0.020
60	6.49	0.0004	0.011
75	7.88	0.0002	0.004
84	9.34	0.0001	0.002
90	9.94	0.0000	0.001
95	10.77	0.0000	0.001

Measure	Trask	Inman	Folk-Ward
Median, phi	5.64	5.64	5.64
Median, in.	0.0008	0.0008	0.0008
Median, mm	0.020	0.020	0.020
Mean, phi	4.21	5.73	5.70
Mean, in.	0.0021	0.0007	0.0008
Mean, mm	0.054	0.019	0.019
Sorting	4.941	3.606	3.655
Skewness	1.048	0.025	-0.068
Kurtosis	0.093	0.695	1.087

Grain Size Description Silt
 (ASTM-USCS Scale) (based on Trask Median)

Description (ASTM-USCS Scale)	Retained on Sieve #	Weight Percent
Gravel	4	3.5
Coarse Sand	10	2.3
Medium Sand	40	4.5
Fine Sand	200	20.2
Silt	>0.005 mm	43.3
Clay	<0.005 mm	26.2
Total		100

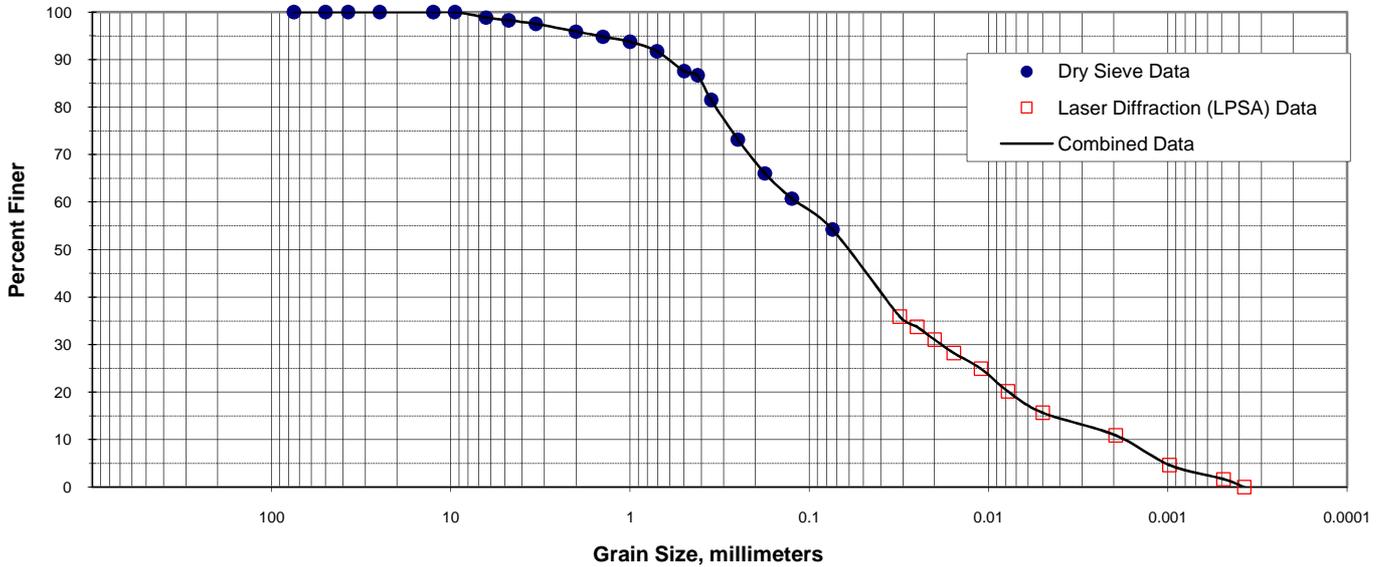
Notes: Dry sieve preparation was drying followed by pass/retained (wash) on 200 sieve.

Client: PES Environmental, Inc.,
Project: American Linen
Project No: 1413-001-02-501B

IGL ID:- 25

IGL File No: 49143
Sample ID: MW-314-43
Depth, ft: 43

COMBINED SIEVE + LASER DIFFRACTION DATA



Dry Sieve Data						Laser Diffraction (LPSA) Data					
Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer	Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer
Inches	Millimeters					Inches	Millimeters				
2.95	75.0	-6.23	3"	0.00	100.00	0.250	6.351	-2.67	1/4	0.00	100.00
1.97	50.0	-5.64	2"	0.00	100.00	0.187	4.757	-2.25	4	0.00	100.00
1.48	37.5	-5.23	1-1/2"	0.00	100.00	0.132	3.364	-1.75	6	0.00	100.00
0.984	25.0	-4.64	1	0.00	100.00	0.079	2.000	-1.00	10	0.00	100.00
0.492	12.5	-3.64	1/2	0.00	100.00	0.047	1.189	-0.25	16	0.00	100.00
0.374	9.50	-3.25	3/8	0.00	100.00	0.033	0.841	0.25	20	1.95	98.05
0.250	6.35	-2.67	1/4	1.08	98.92	0.028	0.707	0.50	25	8.36	91.64
0.187	4.76	-2.25	4	1.74	98.26	0.023	0.595	0.75	30	12.70	87.30
0.132	3.36	-1.75	6	2.48	97.52	0.020	0.500	1.00	35	17.31	82.69
0.079	2.00	-1.00	10	4.05	95.95	0.017	0.420	1.25	40	21.99	78.01
0.056	1.414	-0.50	14	5.13	94.87	0.0139	0.3536	1.50	45	26.54	73.46
0.039	1.000	0.00	18	6.24	93.76	0.0117	0.2973	1.75	50	30.13	69.87
0.028	0.707	0.50	25	8.26	91.74	0.0098	0.2500	2.00	60	34.66	65.34
0.020	0.500	1.00	35	12.40	87.60	0.0083	0.2102	2.25	70	38.06	61.94
0.017	0.420	1.25	40	13.29	86.71	0.0070	0.1768	2.50	80	41.04	58.96
0.014	0.354	1.50	45	18.47	81.53	0.0059	0.1487	2.75	100	43.67	56.33
0.010	0.250	2.00	60	26.77	73.23	0.0049	0.1250	3.00	120	46.10	53.90
0.007	0.1768	2.50	80	33.89	66.11	0.0041	0.1051	3.25	140	48.42	51.58
0.005	0.1250	3.00	120	39.21	60.79	0.0035	0.0884	3.50	170	50.72	49.28
0.003	0.0743	3.75	200	45.77	54.23	0.0029	0.0743	3.75	200	53.02	46.98
0.002	0.0526	4.25	270	46.20	53.80	0.0025	0.0625	4.00	230	55.32	44.68
0.001	0.0372	4.75	400	46.21	53.79	0.0021	0.0526	4.25	270	57.57	42.43
			PAN	100	0.00	0.0017	0.0442	4.50	325	59.76	40.24
						0.0015	0.0372	4.75	400	61.93	38.07
						0.0012	0.0313	5.00	450	64.08	35.92
						0.0010	0.0250	5.32	500	66.23	33.77
						0.0008	0.0201	5.64	635	68.95	31.05
						0.0006	0.0156	6.00		71.76	28.24
						0.0004	0.0110	6.50		75.05	24.95
						0.0003	0.0078	7.00		79.84	20.16
						0.0002	0.0050	7.65		84.33	15.67
						0.00008	0.00195	9.00		89.09	10.91
						0.00004	0.00098	10.00		95.36	4.64
						0.00002	0.00049	11.00		98.28	1.72
						0.00001	0.00038	11.38		100.00	0.00

Client: PES Environmental, Inc., **IGL ID:-** 25 **IGL File No:** 49143
Project: American Linen **Sample ID:** MW-314-43
Project No: 1413-001-02-501B **Depth, ft:** 43

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA

(Tabular Data plus Statistics)

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA						
Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1.00	0.0	100.0	0.0
0.492	12.5	-3.64	1/2	0.0	100.0	0.0
0.374	9.50	-3.25	3/8	0.0	100.0	0.0
0.250	6.35	-2.67	1/4	1.1	98.9	1.1
0.1873	4.76	-2.25	4	0.7	98.3	1.7
0.1324	3.364	-1.75	6	0.7	97.5	2.5
0.0787	2.000	-1.00	10	1.6	96.0	4.0
0.0557	1.414	-0.50	14	1.1	94.9	5.1
0.0394	1.000	0.00	18	1.1	93.8	6.2
0.0278	0.707	0.50	25	2.0	91.7	8.3
0.0197	0.500	1.00	35	4.1	87.6	12.4
0.01655	0.420	1.25	40	0.9	86.7	13.3
0.01392	0.354	1.50	45	5.2	81.5	18.5
0.00984	0.2500	2.00	60	8.3	73.2	26.8
0.00696	0.1768	2.50	80	7.1	66.1	33.9
0.00585	0.1487	2.75	100	9.8	56.3	43.7
0.00492	0.1250	3.00	120	2.4	53.9	46.1
0.00414	0.1051	3.25	140	2.3	51.6	48.4
0.00348	0.0884	3.50	170	2.3	49.3	50.7
0.00293	0.0743	3.75	200	2.3	47.0	53.0
0.00246	0.0625	4.00	230	2.3	44.7	55.3
0.00207	0.0526	4.25	270	2.3	42.4	57.6
0.00174	0.0442	4.50	325	2.2	40.2	59.8
0.00146	0.0372	4.75	400	2.2	38.1	61.9
0.00123	0.0313	5.00	450	2.2	35.9	64.1
0.00099	0.0250	5.32	500	2.1	33.8	66.2
0.00079	0.0201	5.64	635	2.7	31.0	69.0
0.00062	0.0156	6.00		2.8	28.2	71.8
0.00043	0.0110	6.50		3.3	24.9	75.1
0.00031	0.0078	7.00		4.8	20.2	79.8
0.00020	0.0050	7.65		4.5	15.7	84.3
0.00008	0.0020	9.00		4.8	10.9	89.1
0.00004	0.0010	10.00		6.3	4.6	95.4
0.00002	0.0005	11.00		2.9	1.7	98.3
0.00001	0.0004	11.38		1.7	0.0	100.0
TOTALS				100.0	100.0	100.0

COMBINED DATA STATISTICS			
Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-0.56	0.0581	1.475
10	0.71	0.0241	0.611
16	1.38	0.0151	0.384
25	1.89	0.0106	0.269
40	2.66	0.0062	0.159
50	3.42	0.0037	0.093
60	4.53	0.0017	0.043
75	6.49	0.0004	0.011
84	7.60	0.0002	0.005
90	9.15	0.0001	0.002
95	9.94	0.0000	0.001

Measure	Trask	Inman	Folk-Ward
Median, phi	3.42	3.42	3.42
Median, in.	0.0037	0.0037	0.0037
Median, mm	0.093	0.093	0.093
Mean, phi	2.83	4.49	4.13
Mean, in.	0.0055	0.0018	0.0022
Mean, mm	0.140	0.045	0.057
Sorting	4.923	3.108	3.146
Skewness	0.586	0.343	0.292
Kurtosis	0.212	0.689	0.936

Grain Size Description (ASTM-USCS Scale) Fine sand (based on Trask Median)

Description (ASTM-USCS Scale)	Retained on Sieve #	Weight Percent
Gravel	4	1.7
Coarse Sand	10	2.3
Medium Sand	40	9.2
Fine Sand	200	39.7
Silt	>0.005 mm	31.3
Clay	<0.005 mm	15.7
Total		100

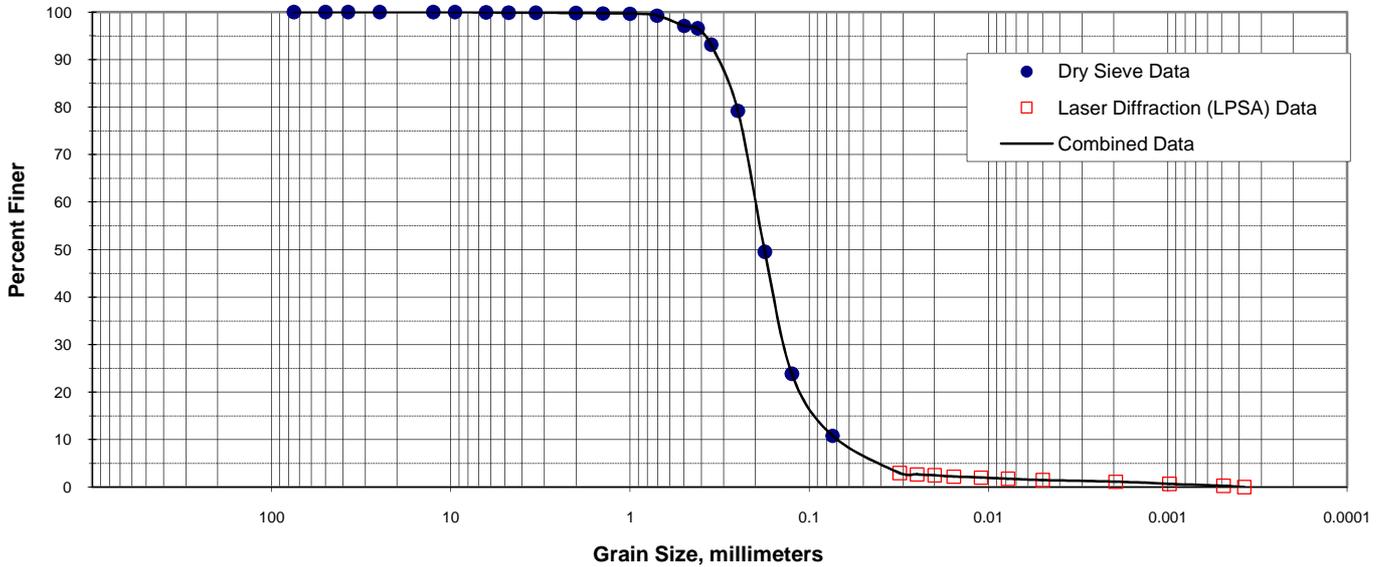
Notes: Dry sieve preparation was drying followed by pass/retained (wash) on 200 sieve.

Client: PES Environmental, Inc.,
Project: American Linen
Project No: 1413-001-02-501B

IGL ID:- 26

IGL File No: 49143
Sample ID: MW-326-39
Depth, ft: 39

COMBINED SIEVE + LASER DIFFRACTION DATA



Dry Sieve Data						Laser Diffraction (LPSA) Data					
Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer	Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer
Inches	Millimeters					Inches	Millimeters				
2.95	75.0	-6.23	3"	0.00	100.00	0.250	6.351	-2.67	1/4	0.00	100.00
1.97	50.0	-5.64	2"	0.00	100.00	0.187	4.757	-2.25	4	0.00	100.00
1.48	37.5	-5.23	1-1/2"	0.00	100.00	0.132	3.364	-1.75	6	0.00	100.00
0.984	25.0	-4.64	1	0.00	100.00	0.079	2.000	-1.00	10	0.00	100.00
0.492	12.5	-3.64	1/2	0.00	100.00	0.047	1.189	-0.25	16	0.00	100.00
0.374	9.50	-3.25	3/8	0.00	100.00	0.033	0.841	0.25	20	0.41	99.59
0.250	6.35	-2.67	1/4	0.07	99.93	0.028	0.707	0.50	25	2.23	97.77
0.187	4.76	-2.25	4	0.12	99.88	0.023	0.595	0.75	30	4.12	95.88
0.132	3.36	-1.75	6	0.12	99.88	0.020	0.500	1.00	35	6.90	93.10
0.079	2.00	-1.00	10	0.17	99.83	0.017	0.420	1.25	40	10.74	89.26
0.056	1.414	-0.50	14	0.22	99.78	0.0139	0.3536	1.50	45	15.80	84.20
0.039	1.000	0.00	18	0.28	99.72	0.0117	0.2973	1.75	50	21.50	78.50
0.028	0.707	0.50	25	0.68	99.32	0.0098	0.2500	2.00	60	32.60	67.40
0.020	0.500	1.00	35	2.84	97.16	0.0083	0.2102	2.25	70	45.10	54.90
0.017	0.420	1.25	40	3.43	96.57	0.0070	0.1768	2.50	80	58.81	41.19
0.014	0.354	1.50	45	6.84	93.16	0.0059	0.1487	2.75	100	71.51	28.49
0.010	0.250	2.00	60	20.72	79.28	0.0049	0.1250	3.00	120	81.35	18.65
0.007	0.1768	2.50	80	50.46	49.54	0.0041	0.1051	3.25	140	87.87	12.13
0.005	0.1250	3.00	120	76.13	23.87	0.0035	0.0884	3.50	170	91.68	8.32
0.003	0.0743	3.75	200	89.13	10.87	0.0029	0.0743	3.75	200	93.81	6.19
0.002	0.0526	4.25	270	90.03	9.97	0.0025	0.0625	4.00	230	95.05	4.95
0.001	0.0372	4.75	400	90.06	9.94	0.0021	0.0526	4.25	270	95.83	4.17
			PAN	100	0.00	0.0017	0.0442	4.50	325	96.35	3.65
						0.0015	0.0372	4.75	400	96.73	3.27
						0.0012	0.0313	5.00	450	97.03	2.97
						0.0010	0.0250	5.32	500	97.27	2.73
						0.0008	0.0201	5.64	635	97.52	2.48
						0.0006	0.0156	6.00		97.73	2.27
						0.0004	0.0110	6.50		97.94	2.06
						0.0003	0.0078	7.00		98.23	1.77
						0.0002	0.0050	7.65		98.51	1.49
						0.00008	0.00195	9.00		98.82	1.18
						0.00004	0.00098	10.00		99.32	0.68
						0.00002	0.00049	11.00		99.71	0.29
						0.00001	0.00038	11.38		100.00	0.00

Client: PES Environmental, Inc., **IGL ID:-** 26 **IGL File No:** 49143
Project: American Linen **Sample ID:** MW-326-39
Project No: 1413-001-02-501B **Depth, ft:** 39

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA
 (Tabular Data plus Statistics)

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA						
Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1.00	0.0	100.0	0.0
0.492	12.5	-3.64	1/2	0.0	100.0	0.0
0.374	9.50	-3.25	3/8	0.0	100.0	0.0
0.250	6.35	-2.67	1/4	0.1	99.9	0.1
0.1873	4.76	-2.25	4	0.0	99.9	0.1
0.1324	3.364	-1.75	6	0.0	99.9	0.1
0.0787	2.000	-1.00	10	0.1	99.8	0.2
0.0557	1.414	-0.50	14	0.1	99.8	0.2
0.0394	1.000	0.00	18	0.1	99.7	0.3
0.0278	0.707	0.50	25	0.4	99.3	0.7
0.0197	0.500	1.00	35	2.2	97.2	2.8
0.01655	0.420	1.25	40	0.6	96.6	3.4
0.01392	0.354	1.50	45	3.4	93.2	6.8
0.00984	0.2500	2.00	60	13.9	79.3	20.7
0.00696	0.1768	2.50	80	29.7	49.5	50.5
0.00585	0.1487	2.75	100	21.0	28.5	71.5
0.00492	0.1250	3.00	120	9.8	18.6	81.4
0.00414	0.1051	3.25	140	6.5	12.1	87.9
0.00348	0.0884	3.50	170	3.8	8.3	91.7
0.00293	0.0743	3.75	200	2.1	6.2	93.8
0.00246	0.0625	4.00	230	1.2	5.0	95.0
0.00207	0.0526	4.25	270	0.8	4.2	95.8
0.00174	0.0442	4.50	325	0.5	3.7	96.3
0.00146	0.0372	4.75	400	0.4	3.3	96.7
0.00123	0.0313	5.00	450	0.3	3.0	97.0
0.00099	0.0250	5.32	500	0.2	2.7	97.3
0.00079	0.0201	5.64	635	0.3	2.5	97.5
0.00062	0.0156	6.00		0.2	2.3	97.7
0.00043	0.0110	6.50		0.2	2.1	97.9
0.00031	0.0078	7.00		0.3	1.8	98.2
0.00020	0.0050	7.65		0.3	1.5	98.5
0.00008	0.0020	9.00		0.3	1.2	98.8
0.00004	0.0010	10.00		0.5	0.7	99.3
0.00002	0.0005	11.00		0.4	0.3	99.7
0.00001	0.0004	11.38		0.3	0.0	100.0
TOTALS				100.0	100.0	

COMBINED DATA STATISTICS			
Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	1.37	0.0153	0.388
10	1.61	0.0129	0.327
16	1.83	0.0111	0.281
25	2.07	0.0094	0.238
40	2.32	0.0079	0.200
50	2.49	0.0070	0.178
60	2.61	0.0064	0.163
75	2.84	0.0055	0.140
84	3.10	0.0046	0.117
90	3.39	0.0038	0.095
95	3.99	0.0025	0.063

Measure	Trask	Inman	Folk-Ward
Median, phi	2.49	2.49	2.49
Median, in.	0.0070	0.0070	0.0070
Median, mm	0.178	0.178	0.178
Mean, phi	2.40	2.47	2.47
Mean, in.	0.0074	0.0071	0.0071
Mean, mm	0.189	0.181	0.180
Sorting	1.304	0.636	0.716
Skewness	1.026	-0.042	0.050
Kurtosis	0.212	1.064	1.403
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Trask Median)		

Description (ASTM-USCS Scale)	Retained on Sieve #	Weight Percent
Gravel	4	0.1
Coarse Sand	10	0.1
Medium Sand	40	3.3
Fine Sand	200	90.4
Silt	>0.005 mm	4.7
Clay	<0.005 mm	1.5
Total		100

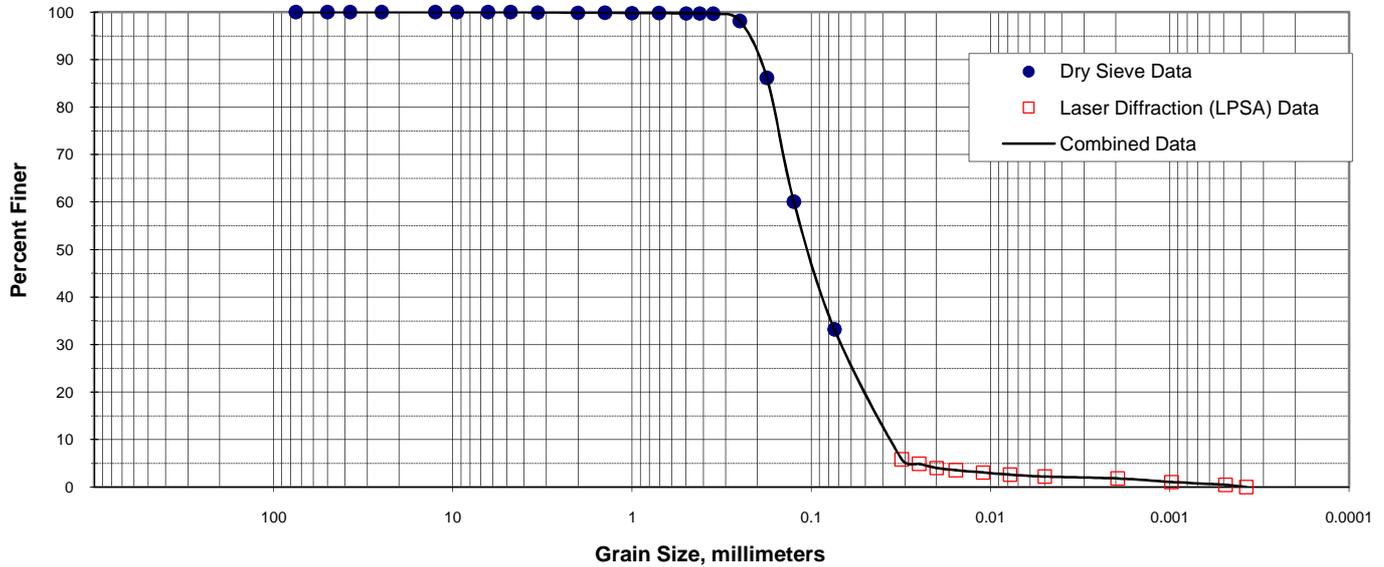
Notes: Dry sieve preparation was drying followed by pass/retained (wash) on 200 sieve.

Client: PES Environmental, Inc.,
Project: American Linen
Project No: 1413-001-02-501B

IGL ID:- 27

IGL File No: 49143
Sample ID: MW-311-40
Depth, ft: 40

COMBINED SIEVE + LASER DIFFRACTION DATA



Dry Sieve Data						Laser Diffraction (LPSA) Data					
Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer	Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer
Inches	Millimeters					Inches	Millimeters				
2.95	75.0	-6.23	3"	0.00	100.00	0.250	6.351	-2.67	1/4	0.00	100.00
1.97	50.0	-5.64	2"	0.00	100.00	0.187	4.757	-2.25	4	0.00	100.00
1.48	37.5	-5.23	1-1/2"	0.00	100.00	0.132	3.364	-1.75	6	0.00	100.00
0.984	25.0	-4.64	1	0.00	100.00	0.079	2.000	-1.00	10	0.00	100.00
0.492	12.5	-3.64	1/2	0.00	100.00	0.047	1.189	-0.25	16	0.00	100.00
0.374	9.50	-3.25	3/8	0.00	100.00	0.033	0.841	0.25	20	0.28	99.72
0.250	6.35	-2.67	1/4	0.00	100.00	0.028	0.707	0.50	25	0.78	99.22
0.187	4.76	-2.25	4	0.00	100.00	0.023	0.595	0.75	30	0.96	99.04
0.132	3.36	-1.75	6	0.02	99.98	0.020	0.500	1.00	35	1.33	98.67
0.079	2.00	-1.00	10	0.09	99.91	0.017	0.420	1.25	40	1.99	98.01
0.056	1.414	-0.50	14	0.13	99.87	0.0139	0.3536	1.50	45	2.71	97.29
0.039	1.000	0.00	18	0.16	99.84	0.0117	0.2973	1.75	50	3.68	96.32
0.028	0.707	0.50	25	0.19	99.81	0.0098	0.2500	2.00	60	7.06	92.94
0.020	0.500	1.00	35	0.22	99.78	0.0083	0.2102	2.25	70	13.36	86.64
0.017	0.420	1.25	40	0.23	99.77	0.0070	0.1768	2.50	80	23.35	76.65
0.014	0.354	1.50	45	0.31	99.69	0.0059	0.1487	2.75	100	36.05	63.95
0.010	0.250	2.00	60	1.86	98.14	0.0049	0.1250	3.00	120	49.55	50.45
0.007	0.1768	2.50	80	13.84	86.16	0.0041	0.1051	3.25	140	61.76	38.24
0.005	0.1250	3.00	120	39.88	60.12	0.0035	0.0884	3.50	170	71.53	28.47
0.003	0.0743	3.75	200	66.76	33.24	0.0029	0.0743	3.75	200	78.86	21.14
0.002	0.0526	4.25	270	71.59	28.41	0.0025	0.0625	4.00	230	84.23	15.77
0.001	0.0372	4.75	400	72.22	27.78	0.0021	0.0526	4.25	270	88.11	11.89
			PAN	100	0.00	0.0017	0.0442	4.50	325	90.88	9.12
						0.0015	0.0372	4.75	400	92.81	7.19
						0.0012	0.0313	5.00	450	94.16	5.84
						0.0010	0.0250	5.32	500	95.10	4.90
						0.0008	0.0201	5.64	635	95.91	4.09
						0.0006	0.0156	6.00		96.44	3.56
						0.0004	0.0110	6.50		96.87	3.13
						0.0003	0.0078	7.00		97.35	2.65
						0.0002	0.0050	7.65		97.75	2.25
						0.00008	0.00195	9.00		98.17	1.83
						0.00004	0.00098	10.00		98.87	1.13
						0.00002	0.00049	11.00		99.50	0.50
						0.00001	0.00038	11.38		100.00	0.00

Client: PES Environmental, Inc., **IGL ID:-** 27 **IGL File No:** 49143
Project: American Linen **Sample ID:** MW-311-40
Project No: 1413-001-02-501B **Depth, ft:** 40

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA
 (Tabular Data plus Statistics)

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA						
Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1.00	0.0	100.0	0.0
0.492	12.5	-3.64	1/2	0.0	100.0	0.0
0.374	9.50	-3.25	3/8	0.0	100.0	0.0
0.250	6.35	-2.67	1/4	0.0	100.0	0.0
0.1873	4.76	-2.25	4	0.0	100.0	0.0
0.1324	3.364	-1.75	6	0.0	100.0	0.0
0.0787	2.000	-1.00	10	0.1	99.9	0.1
0.0557	1.414	-0.50	14	0.0	99.9	0.1
0.0394	1.000	0.00	18	0.0	99.8	0.2
0.0278	0.707	0.50	25	0.0	99.8	0.2
0.0197	0.500	1.00	35	0.0	99.8	0.2
0.01655	0.420	1.25	40	0.0	99.8	0.2
0.01392	0.354	1.50	45	0.1	99.7	0.3
0.00984	0.2500	2.00	60	1.5	98.1	1.9
0.00696	0.1768	2.50	80	12.0	86.2	13.8
0.00585	0.1487	2.75	100	22.2	63.9	36.1
0.00492	0.1250	3.00	120	13.5	50.4	49.6
0.00414	0.1051	3.25	140	12.2	38.2	61.8
0.00348	0.0884	3.50	170	9.8	28.5	71.5
0.00293	0.0743	3.75	200	7.3	21.1	78.9
0.00246	0.0625	4.00	230	5.4	15.8	84.2
0.00207	0.0526	4.25	270	3.9	11.9	88.1
0.00174	0.0442	4.50	325	2.8	9.1	90.9
0.00146	0.0372	4.75	400	1.9	7.2	92.8
0.00123	0.0313	5.00	450	1.4	5.8	94.2
0.00099	0.0250	5.32	500	0.9	4.9	95.1
0.00079	0.0201	5.64	635	0.8	4.1	95.9
0.00062	0.0156	6.00		0.5	3.6	96.4
0.00043	0.0110	6.50		0.4	3.1	96.9
0.00031	0.0078	7.00		0.5	2.7	97.3
0.00020	0.0050	7.65		0.4	2.3	97.7
0.00008	0.0020	9.00		0.4	1.8	98.2
0.00004	0.0010	10.00		0.7	1.1	98.9
0.00002	0.0005	11.00		0.6	0.5	99.5
0.00001	0.0004	11.38		0.5	0.0	100.0
TOTALS				100.0	100.0	

COMBINED DATA STATISTICS			
Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	2.13	0.0090	0.228
10	2.34	0.0078	0.198
16	2.52	0.0068	0.174
25	2.63	0.0064	0.162
40	2.82	0.0056	0.141
50	3.01	0.0049	0.124
60	3.21	0.0042	0.108
75	3.62	0.0032	0.081
84	3.99	0.0025	0.063
90	4.42	0.0018	0.047
95	5.29	0.0010	0.026

Measure	Trask	Inman	Folk-Ward
Median, phi	3.01	3.01	3.01
Median, in.	0.0049	0.0049	0.0049
Median, mm	0.124	0.124	0.124
Mean, phi	3.04	3.26	3.17
Mean, in.	0.0048	0.0041	0.0044
Mean, mm	0.122	0.105	0.111
Sorting	1.411	0.733	0.844
Skewness	0.925	0.338	0.391
Kurtosis	0.267	1.154	1.303
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Trask Median)		

Description (ASTM-USCS Scale)	Retained on Sieve #	Weight Percent
Gravel	4	0.0
Coarse Sand	10	0.1
Medium Sand	40	0.1
Fine Sand	200	78.6
Silt	>0.005 mm	18.9
Clay	<0.005 mm	2.3
Total		100

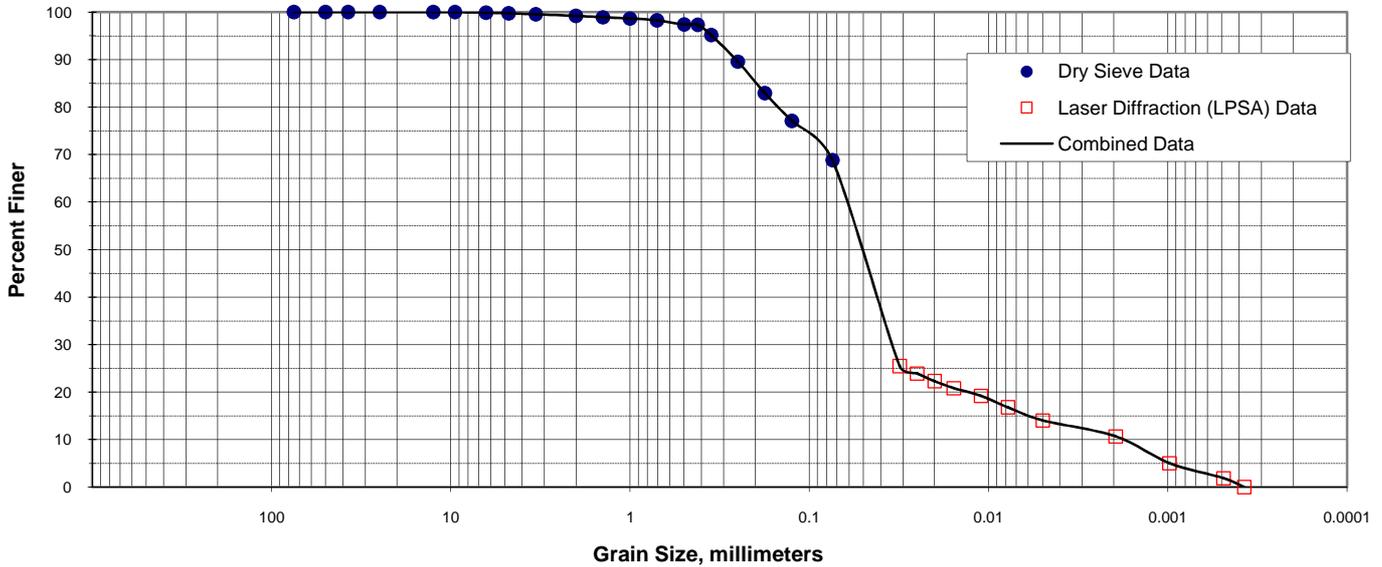
Notes: Dry sieve preparation was drying followed by pass/retained (wash) on 200 sieve.

Client: PES Environmental, Inc.,
Project: American Linen
Project No: 1413-001-02-501B

IGL ID:- 28

IGL File No: 49143
Sample ID: MW-328-45
Depth, ft: 45

COMBINED SIEVE + LASER DIFFRACTION DATA



Dry Sieve Data						Laser Diffraction (LPSA) Data					
Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer	Opening		Phi of Screen	U.S. Sieve No.	Cumulative Weight, percent	Percent Finer
Inches	Millimeters					Inches	Millimeters				
2.95	75.0	-6.23	3"	0.00	100.00	0.250	6.351	-2.67	1/4	0.00	100.00
1.97	50.0	-5.64	2"	0.00	100.00	0.187	4.757	-2.25	4	0.00	100.00
1.48	37.5	-5.23	1-1/2"	0.00	100.00	0.132	3.364	-1.75	6	0.00	100.00
0.984	25.0	-4.64	1	0.00	100.00	0.079	2.000	-1.00	10	0.00	100.00
0.492	12.5	-3.64	1/2	0.00	100.00	0.047	1.189	-0.25	16	0.00	100.00
0.374	9.50	-3.25	3/8	0.00	100.00	0.033	0.841	0.25	20	0.26	99.74
0.250	6.35	-2.67	1/4	0.13	99.87	0.028	0.707	0.50	25	1.50	98.50
0.187	4.76	-2.25	4	0.24	99.76	0.023	0.595	0.75	30	2.79	97.21
0.132	3.36	-1.75	6	0.44	99.56	0.020	0.500	1.00	35	5.29	94.71
0.079	2.00	-1.00	10	0.78	99.22	0.017	0.420	1.25	40	9.71	90.29
0.056	1.414	-0.50	14	1.01	98.99	0.0139	0.3536	1.50	45	16.02	83.98
0.039	1.000	0.00	18	1.30	98.70	0.0117	0.2973	1.75	50	22.28	77.72
0.028	0.707	0.50	25	1.74	98.26	0.0098	0.2500	2.00	60	31.31	68.69
0.020	0.500	1.00	35	2.60	97.40	0.0083	0.2102	2.25	70	38.42	61.58
0.017	0.420	1.25	40	2.66	97.34	0.0070	0.1768	2.50	80	44.45	55.55
0.014	0.354	1.50	45	4.83	95.17	0.0059	0.1487	2.75	100	49.38	50.62
0.010	0.250	2.00	60	10.37	89.63	0.0049	0.1250	3.00	120	53.44	46.56
0.007	0.1768	2.50	80	17.04	82.96	0.0041	0.1051	3.25	140	56.94	43.06
0.005	0.1250	3.00	120	22.92	77.08	0.0035	0.0884	3.50	170	60.12	39.88
0.003	0.0743	3.75	200	31.16	68.84	0.0029	0.0743	3.75	200	63.10	36.90
0.002	0.0526	4.25	270	32.25	67.75	0.0025	0.0625	4.00	230	65.92	34.08
0.001	0.0372	4.75	400	32.28	67.72	0.0021	0.0526	4.25	270	68.50	31.50
			PAN	100	0.00	0.0017	0.0442	4.50	325	70.79	29.21
						0.0015	0.0372	4.75	400	72.80	27.20
						0.0012	0.0313	5.00	450	74.53	25.47
						0.0010	0.0250	5.32	500	76.02	23.98
						0.0008	0.0201	5.64	635	77.65	22.35
						0.0006	0.0156	6.00		79.11	20.89
						0.0004	0.0110	6.50		80.72	19.28
						0.0003	0.0078	7.00		83.20	16.80
						0.0002	0.0050	7.65		85.90	14.10
						0.00008	0.00195	9.00		89.26	10.74
						0.00004	0.00098	10.00		94.92	5.08
						0.00002	0.00049	11.00		98.08	1.92
						0.00001	0.00038	11.38		100.00	0.00

Client: PES Environmental, Inc., **IGL ID:-** 28 **IGL File No:** 49143
Project: American Linen **Sample ID:** MW-328-45
Project No: 1413-001-02-501B **Depth, ft:** 45

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA
 (Tabular Data plus Statistics)

SIEVE ANALYSIS AND LASER DIFFRACTION METHOD COMBINED DATA						
Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1.00	0.0	100.0	0.0
0.492	12.5	-3.64	1/2	0.0	100.0	0.0
0.374	9.50	-3.25	3/8	0.0	100.0	0.0
0.250	6.35	-2.67	1/4	0.1	99.9	0.1
0.1873	4.76	-2.25	4	0.1	99.8	0.2
0.1324	3.364	-1.75	6	0.2	99.6	0.4
0.0787	2.000	-1.00	10	0.3	99.2	0.8
0.0557	1.414	-0.50	14	0.2	99.0	1.0
0.0394	1.000	0.00	18	0.3	98.7	1.3
0.0278	0.707	0.50	25	0.4	98.3	1.7
0.0197	0.500	1.00	35	0.9	97.4	2.6
0.01655	0.420	1.25	40	0.1	97.3	2.7
0.01392	0.354	1.50	45	2.2	95.2	4.8
0.00984	0.2500	2.00	60	5.5	89.6	10.4
0.00696	0.1768	2.50	80	6.7	83.0	17.0
0.00585	0.1487	2.75	100	32.3	50.6	49.4
0.00492	0.1250	3.00	120	4.1	46.6	53.4
0.00414	0.1051	3.25	140	3.5	43.1	56.9
0.00348	0.0884	3.50	170	3.2	39.9	60.1
0.00293	0.0743	3.75	200	3.0	36.9	63.1
0.00246	0.0625	4.00	230	2.8	34.1	65.9
0.00207	0.0526	4.25	270	2.6	31.5	68.5
0.00174	0.0442	4.50	325	2.3	29.2	70.8
0.00146	0.0372	4.75	400	2.0	27.2	72.8
0.00123	0.0313	5.00	450	1.7	25.5	74.5
0.00099	0.0250	5.32	500	1.5	24.0	76.0
0.00079	0.0201	5.64	635	1.6	22.3	77.7
0.00062	0.0156	6.00		1.5	20.9	79.1
0.00043	0.0110	6.50		1.6	19.3	80.7
0.00031	0.0078	7.00		2.5	16.8	83.2
0.00020	0.0050	7.65		2.7	14.1	85.9
0.00008	0.0020	9.00		3.4	10.7	89.3
0.00004	0.0010	10.00		5.7	5.1	94.9
0.00002	0.0005	11.00		3.2	1.9	98.1
0.00001	0.0004	11.38		1.9	0.0	100.0
TOTALS				100.0	100.0	

COMBINED DATA STATISTICS			
Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	1.52	0.0138	0.350
10	1.97	0.0101	0.256
16	2.42	0.0073	0.187
25	2.56	0.0067	0.169
40	2.68	0.0062	0.156
50	2.79	0.0057	0.145
60	3.49	0.0035	0.089
75	5.10	0.0011	0.029
84	7.19	0.0003	0.007
90	9.13	0.0001	0.002
95	10.02	0.0000	0.001

Measure	Trask	Inman	Folk-Ward
Median, phi	2.79	2.79	2.79
Median, in.	0.0057	0.0057	0.0057
Median, mm	0.145	0.145	0.145
Mean, phi	3.33	4.81	4.13
Mean, in.	0.0039	0.0014	0.0022
Mean, mm	0.099	0.036	0.057
Sorting	2.411	2.384	2.481
Skewness	0.485	0.846	0.774
Kurtosis	0.276	0.785	1.373
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Trask Median)		

Description (ASTM-USCS Scale)	Retained on Sieve #	Weight Percent
Gravel	4	0.2
Coarse Sand	10	0.5
Medium Sand	40	1.9
Fine Sand	200	60.4
Silt	>0.005 mm	22.8
Clay	<0.005 mm	14.1
Total		100

Notes: Dry sieve preparation was drying followed by pass/retained (wash) on 200 sieve.

(formerly PTS Laboratories, Inc.)

COMPANY: **PES ENVIRONMENTAL, INC**

ADDRESS: 1215 4th AVE STE 1350
CITY: SEATTLE WA
ZIP CODE: 98161

PROJECT MANAGER NAME: **BILL HALDEMAN**
EMAIL: **BHALDEMAN@PESENV.COM**
PHONE #: **206 529 3980**

PROJECT NAME: **AMERICAN LINEN**

PROJECT NUMBER: **1413-001-02-501B**

SITE LOCATION: **SEATTLE WA**

SAMPLER SIGNATURE: *RT McLaughlin*

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	DEPTH, FEET	NUMBER OF SAMPLES	SOIL PROPERTIES PACKAGE	HYDRAULIC CONDUCTIVITY	PORE FLUID SATURATION PACKAGE	TCEQ/TNRCC PROPERTIES PACKAGE	CAPILLARITY PACKAGE	FLUID PROPERTIES PACKAGE	CORE PHOTOGRAPHY	VAPOR TRANSPORT PACKAGE	POROSITY: TOTAL, AIR-FILLED, WATER-FILLED	PROSITY: EFFECTIVE, ASTM D425M	SPECIFIC GRAVITY, ASTM D854	BULK DENSITY (DRY), API RP40, or ASTM D2937	AIR PERMEABILITY, API RP40	HYDRAULIC CONDUCTIVITY, EPA 9100/API RP40 OR ASTM D5084	GRAIN SIZE DISTRIBUTION, ASTM D422 or D4464M	TOC: WALKLEY-BLACK	FOC	ATTERBERG LIMITS, ASTM D4318	VAPOR INTRUSION PACKAGE	FREE PRODUCT MOBILITY PACKAGE
MW-323-43.5	9/28/19		43.5-44	1																				
MW-323-32.5	9/28/19		32.5-33.5	2																				
MW-323-100	9/28/19		100-101	1																				
MW-303-65	10/3/19		65-66	1																				
MW-308-80	10/3/19		80-81	1																				
MW-308-33	9/20/19		33-34	1																				
MW-308-40	9/20/19		40-41	2																				

PO #: _____

BILLING ADDRESS: 1215 4th AVE STE 1350
SEATTLE WA 98161

BILLING EMAIL: _____

BILLING CONTACT: **B. HALDEMAN**

BILLING PHONE #: **206 529 3980**

TURNAROUND TIME

24 HOURS	5 DAYS	
72 HOURS	NORMAL	X

OTHERS: _____

SAMPLE INTEGRITY (CHECK):
INTACT: _____ TEMP (F) _____

IGL QUOTE NO/DATE: _____

IGL FILE NO: **49143**

COMMENTS: _____

1. RELINQUISHED BY: <i>RT McLaughlin</i>	2. RECEIVED BY: Chicki	1. RELINQUISHED BY: _____	2. RECEIVED BY: _____
COMPANY: PES ENVIRONMENTAL	COMPANY: IGL Houston	COMPANY: _____	COMPANY: _____
DATE: 10/9/19 TIME: 0700	DATE: 10/15/19 TIME: _____	DATE: _____ TIME: _____	DATE: _____ TIME: _____

***NOTE: FOR SAMPLES W/ 2 RINGS PROVIDED, ONLY ANALYZE XI RING. 2nd IS BACKUP**

INTEGRATED GEOSCIENCES LABORATORIES, LLC

CHAIN OF CUSTODY

(formerly PTS Laboratories, Inc.)

COMPANY: **PES ENVIRONMENTAL**

ADDRESS: **1215 4th AVE STE 1350** CITY: **SEATTLE WA** ZIP CODE: **98161**

PROJECT MANAGER NAME: **BILL HALDEMAN** EMAIL: **BHALDEMAN@PESENV.COM** PHONE #: **206 529-3980**

PROJECT NAME: **AMERICAN LINEN**

PROJECT NUMBER: **1413-001-02-501B**

SITE LOCATION: **SEATTLE WA**

SAMPLER SIGNATURE: *[Signature]*

ANALYSIS REQUEST

NUMBER OF SAMPLES	SOIL PROPERTIES PACKAGE	HYDRAULIC CONDUCTIVITY	PORE FLUID SATURATION PACKAGE	TCED/INRCC PROPERTIES PACKAGE	CAPILLARITY PACKAGE	FLUID PROPERTIES PACKAGE	CORE PHOTOGRAPHY	VAPOR TRANSPORT PACKAGE	POROSITY: TOTAL, AIR-FILLED, WATER-FILLED	PROSITY: EFFECTIVE, ASTM D425M	SPECIFIC GRAVITY, ASTM D854	BULK DENSITY (DRY), API RP40 or ASTM D2937	AIR PERMEABILITY, API RP40	HYDRAULIC CONDUCTIVITY, EPA 8100/API RP40 OR ASTM D5084	GRAIN SIZE DISTRIBUTION, ASTM D472 & D4464M	TOC: WALKLEY-BLACK	ATTERBERG LIMITS, ASTM D4318	VAPOR INTRUSION PACKAGE	FREE PRODUCT MOBILITY PACKAGE
8															X				
9															X				
10															X				
11															X				
12															X				

PO #:

BILLING ADDRESS: **SAME AS LEFT**

BILLING EMAIL:

BILLING CONTACT: **BILL HALDEMAN**

BILLING PHONE #: **206 529 3980**

TURNAROUND TIME

24 HOURS	5 DAYS
72 HOURS	NORMAL <input checked="" type="checkbox"/>

OTHERS:

SAMPLE INTEGRITY (CHECK):

INTACT: _____ TEMP (F) _____

IGL QUOTE NO/DATE

IGL FILE NO **49143**

COMMENTS

8
9
10
11
12

Grab in Ziplock bag

..

..

..

..

1. RELINQUISHED BY: <i>[Signature]</i>	2. RECEIVED BY: <i>Chicli</i>	1. RELINQUISHED BY:	2. RECEIVED BY:
COMPANY: PES ENVIRONMENTAL	COMPANY: IGL Houston	COMPANY:	COMPANY:
DATE: 10/9/19 TIME: 0700	DATE: 10/15/19 TIME:	DATE:	DATE:

(formerly PTS Laboratories, Inc.)

COMPANY: **PES ENVIRONMENTAL, INC**

ADDRESS: **1215 4th AVE SEATTLE WA 98161**
 STE 1350

PROJECT MANAGER NAME: **BILL HALDEMAN** EMAIL: **BHALDEMAN@PESENV.COM** PHONE #: **206 529 3980**

PROJECT NAME: **AMERICAN LINEN**

PROJECT NUMBER: **1413-001-02-501B**

SITE LOCATION: **SEATTLE WA**

SAMPLER SIGNATURE: *[Signature]*

ANALYSIS REQUEST

NUMBER OF SAMPLES	SOIL PROPERTIES PACKAGE	HYDRAULIC CONDUCTIVITY	PORE FLUID SATURATION PACKAGE	TCEQ/TNRCC PROPERTIES PACKAGE	CAPILLARITY PACKAGE	FLUID PROPERTIES PACKAGE	CORE PHOTOGRAPHY	VAPOR TRANSPORT PACKAGE	POROSITY: TOTAL, AIR-FILLED, WATER-FILLED	PROSITY: EFFECTIVE, ASTM D425M	SPECIFIC GRAVITY, ASTM D854	BULK DENSITY (DRY), API RP40, or ASTM D2937	AIR PERMEABILITY, API RP40	HYDRAULIC CONDUCTIVITY, EPA 9100/API RP40 OR ASTM D5084	GRAIN SIZE DISTRIBUTION, ASTM D422 or D4641M	FOC WALKLEY-BLACK	ATTERBERG LIMITS, ASTM D4318	VAPOR INTRUSION PACKAGE	FREE PRODUCT MOBILITY PACKAGE
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PO #:

BILLING ADDRESS: **1215 4th AVE SE STE 1350 SEATTLE WA 98161**

BILLING EMAIL:

BILLING CONTACT: **B. HALDEMAN**

BILLING PHONE #: **206 529 3980**

TURNAROUND TIME

24 HOURS	5 DAYS
72 HOURS	NORMAL <input checked="" type="checkbox"/>

OTHERS:

SAMPLE INTEGRITY (CHECK):

INTACT: _____ TEMP (F) _____

IGL QUOTE NO/DATE _____

IGL FILE NO **49143**

COMMENTS

SAMPLE ID	DATE	TIME	DEPTH, FEET	NUMBER OF SAMPLES	SOIL PROPERTIES PACKAGE	HYDRAULIC CONDUCTIVITY	PORE FLUID SATURATION PACKAGE	TCEQ/TNRCC PROPERTIES PACKAGE	CAPILLARITY PACKAGE	FLUID PROPERTIES PACKAGE	CORE PHOTOGRAPHY	VAPOR TRANSPORT PACKAGE	POROSITY: TOTAL, AIR-FILLED, WATER-FILLED	PROSITY: EFFECTIVE, ASTM D425M	SPECIFIC GRAVITY, ASTM D854	BULK DENSITY (DRY), API RP40, or ASTM D2937	AIR PERMEABILITY, API RP40	HYDRAULIC CONDUCTIVITY, EPA 9100/API RP40 OR ASTM D5084	GRAIN SIZE DISTRIBUTION, ASTM D422 or D4641M	FOC WALKLEY-BLACK	ATTERBERG LIMITS, ASTM D4318	VAPOR INTRUSION PACKAGE	FREE PRODUCT MOBILITY PACKAGE	
MW-323-43.5	9/28/19		43.5-44	1												X	X	X						
MW-323-32.5	9/28/19		32.5-33.5	2																				
MW-323-100	9/28/19		100-101	1																				
MW-303-65	10/3/19		65-66	1																				
MW-308-80	10/3/19		80-81	1																				
MW-308-33	9/20/19		33-34	1													X							
MW-308-40	9/20/19		40-41	2												X				X				

2.5" * 6" brass tube

NOT IN RING ^{4 1/2" x 7.5"} installed core

* 2.5" * 12" brass tube

* 2.5" * 12" brass tube

* 2.5" * 12" SS tube

* 2.5" * 12" brass tube

* 2.5" * 12" brass tube

1. RELINQUISHED BY: <i>[Signature]</i>	2. RECEIVED BY: Chidi	1. RELINQUISHED BY:	2. RECEIVED BY:
COMPANY: PES ENVIRONMENTAL	COMPANY: IGL Houston	COMPANY:	COMPANY:
DATE: 10/9/19 TIME: 0700	DATE: 10/15/19 TIME:	DATE:	DATE:

***NOTE: FOR SAMPLES W/ 2 RINGS PROVIDED, ONLY ANALYZE X1 RING. 2nd IS BACKUP**

(formerly PTS Laboratories, Inc.)

COMPANY: **PES ENVIRONMENTAL**

ADDRESS: 1215 4th AVE STE 1350 CITY: SEATTLE WA ZIP CODE: 98161

PROJECT MANAGER NAME: BILL HALDEMAN EMAIL: BHALDEMAN@PESENV.COM PHONE #: 206 529-3980

PROJECT NAME: AMERICAN LINEN

PROJECT NUMBER: 1413-001-02-501B

SITE LOCATION: SEATTLE WA

SAMPLER SIGNATURE: *[Signature]*

ANALYSIS REQUEST

NUMBER OF SAMPLES	SOIL PROPERTIES PACKAGE	HYDRAULIC CONDUCTIVITY	PORE FLUID SATURATION PACKAGE	TCEQ/TNRCC PROPERTIES PACKAGE	CAPILLARITY PACKAGE	FLUID PROPERTIES PACKAGE	CORE PHOTOGRAPHY	VAPOR TRANSPORT PACKAGE	POROSITY: TOTAL, AIR-FILLED, WATER-FILLED	PROSITY: EFFECTIVE, ASTM D425M	SPECIFIC GRAVITY, ASTM D854	BULK DENSITY (DRY), API RP40 or ASTM D2937	AIR PERMEABILITY, API RP40	HYDRAULIC CONDUCTIVITY, EPA 9100/API RP40 OR ASTM D5084	GRAIN SIZE DISTRIBUTION, ASTM D422 (D4464M)	TOC: WALKLEY-BLACK	ATTERBERG LIMITS, ASTM D4318	VAPOR INTRUSION PACKAGE	FREE PRODUCT MOBILITY PACKAGE
8															X				
9															X				
10															X				
11															X				
12															X				

PO #:

BILLING ADDRESS: SAME AS LEFT

BILLING EMAIL:

BILLING CONTACT: BILL HALDEMAN

BILLING PHONE #: 206 529 3980

TURNAROUND TIME

24 HOURS	5 DAYS
72 HOURS	NORMAL X

OTHERS:

SAMPLE INTEGRITY (CHECK):

INTACT: TEMP (F)

IGL QUOTE NO/DATE

IGL FILE NO 49143

COMMENTS

8
9
10
11
12

Grab in Ziplock bag

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..

..

1. RELINQUISHED BY: *[Signature]*

COMPANY: PES ENVIRONMENTAL

DATE: 10/9/19 TIME: 0700

2. RECEIVED BY: *Chirli*

COMPANY: IGL *Houston*

DATE: 10/15/19 TIME:

1. RELINQUISHED BY:

COMPANY:

DATE: TIME:

2. RECEIVED BY:

COMPANY:

DATE: TIME:

(formerly PTS Laboratories, Inc.)

COMPANY: **PES ENVIRONMENTAL**

ADDRESS: 1215 4th AVE SEATTLE WA 98161
STE 1350

PROJECT MANAGER NAME: BILL HALDEMAN
EMAIL: BHALDEMAN@PESENV.COM
PHONE #: 206 529-3980

PROJECT NAME: **AMERICAN LINEN**

PROJECT NUMBER: **1413-001-02-501B**

SITE LOCATION: **SEATTLE WA**

SAMPLER SIGNATURE: *[Signature]*

ANALYSIS REQUEST

NUMBER OF SAMPLES	SOIL PROPERTIES PACKAGE	HYDRAULIC CONDUCTIVITY	PORE FLUID SATURATION PACKAGE	TCEQ/TNRCC PROPERTIES PACKAGE	CAPILLARITY PACKAGE	FLUID PROPERTIES PACKAGE	CORE PHOTOGRAPHY	VAPOR TRANSPORT PACKAGE	POROSITY: TOTAL, AIR-FILLED, WATER-FILLED	PROSITY: EFFECTIVE, ASTM D425M	SPECIFIC GRAVITY, ASTM D854	BULK DENSITY (DRY), API RP40 or ASTM D2937	AIR PERMEABILITY, API RP40	HYDRAULIC CONDUCTIVITY, EPA 9100/API RP40 OR ASTM D5084	GRAIN SIZE DISTRIBUTION, ASTM D422 or D4464	TOC: WALKLEY-BLACK	ATTERBERG LIMITS, ASTM D4318	VAPOR INTRUSION PACKAGE	FREE PRODUCT MOBILITY PACKAGE
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PO #:

BILLING ADDRESS: **SAME AS LEFT**

BILLING EMAIL:

BILLING CONTACT: **BILL HALDEMAN**

BILLING PHONE #: **206 529 3980**

TURNAROUND TIME

24 HOURS	5 DAYS
72 HOURS	NORMAL <input checked="" type="checkbox"/>

OTHERS:

SAMPLE INTEGRITY (CHECK):

INTACT: TEMP (F)

IGL QUOTE NO/DATE

IGL FILE NO **49143**

COMMENTS

13
14
15
16
17
18

SAMPLE ID	DATE	TIME	DEPTH, FEET
MW-302-60	10/1/19		60
MW-196-48	9/19/19		48
MW-316-58	9/19/19		58
MW-311-48	9/18/19		48
MW-309-59	9/19/19		59
MW-322-32	9/17/19		32

<input checked="" type="checkbox"/>																			
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Grab in ziplock bag

"

"

"

"

"

1. RELINQUISHED BY: <i>[Signature]</i>	2. RECEIVED BY: <i>Chidi</i>	1. RELINQUISHED BY:	2. RECEIVED BY:
COMPANY: PES ENVIRONMENTAL	COMPANY: IGL	COMPANY:	COMPANY:
DATE: 10/9/19 TIME: 0700	DATE: 10/15/19 TIME:	DATE:	DATE:

(formerly PTS Laboratories, Inc.)

COMPANY: **PES ENVIRONMENTAL INC**

ANALYSIS REQUEST

ADDRESS: 1215 4th AVE STE 1350
 CITY: SEATTLE WA
 ZIP CODE: 98161

PROJECT MANAGER NAME: **Bill HALDEMAN**
 EMAIL: **BHALDEMAN@PESENV.COM**
 PHONE #: **206 529 3980**

PROJECT NAME: **AMERICAN LINEN**

PROJECT NUMBER: **1413-001-02-5018**

SITE LOCATION: **SEATTLE WA**

SAMPLER SIGNATURE: *[Signature]*

PO #:

BILLING ADDRESS: **SAME AS ON LEFT**

BILLING EMAIL:

BILLING CONTACT: **B. HALDEMAN**

BILLING PHONE #: **206 529 3980**

TURNAROUND TIME

24 HOURS		5 DAYS	
72 HOURS		NORMAL	<input checked="" type="checkbox"/>

OTHERS:

SAMPLE INTEGRITY (CHECK):

INTACT: _____ TEMP (F) _____

IGL QUOTE NO/DATE

IGL FILE NO **49143**

COMMENTS

NUMBER OF SAMPLES	SOIL PROPERTIES PACKAGE	HYDRAULIC CONDUCTIVITY	PORE FLUID SATURATION PACKAGE	TCEO/INRCC PROPERTIES PACKAGE	CAPILLARITY PACKAGE	FLUID PROPERTIES PACKAGE	CORE PHOTOGRAPHY	VAPOR TRANSPORT PACKAGE	POROSITY: TOTAL, AIR-FILLED, WATER-FILLED	PROSITY: EFFECTIVE, ASTM D425M	SPECIFIC GRAVITY, ASTM D854	BULK DENSITY (DRY), API RP40 or ASTM D2937	AIR PERMEABILITY, API RP40	HYDRAULIC CONDUCTIVITY, EPA 9100/API RP40 OR ASTM D5084	GRAIN SIZE DISTRIBUTION, ASTM D4757 or D464M	100-WALKLEY-BLACK FOC	ATTERBERG LIMITS, ASTM D4318	VAPOR INTRUSION PACKAGE	FREE PRODUCT MOBILITY PACKAGE
19																			
20															X	X			
21															X				
22															X				
23															X	X			

19
20
21
22
23

Grab in ziplock bag
 "
 "
 "
 "

1. RELINQUISHED BY: <i>[Signature]</i>	2. RECEIVED BY: Chidi	1. RELINQUISHED BY:	2. RECEIVED BY:
COMPANY: PES ENVIRONMENTAL	COMPANY: IGL Houston	COMPANY:	COMPANY:
DATE: 10/19/19 TIME: 0700	DATE: 10/15/19 TIME:	DATE:	DATE:

INTEGRATED GEOSCIENCES LABORATORIES, LLC

CHAIN OF CUSTODY

(formerly PTS Laboratories, Inc.)

COMPANY: **PES ENVIRONMENTAL**

ADDRESS: **1215 4TH AVE SEATTLE WA 98161**
STE 1350

PROJECT MANAGER NAME: **BILL HALDEMAN** EMAIL: **BHALDEMAN@PESENV.COM** PHONE #: **206 529-3980**

PROJECT NAME: **AMERICAN LINEN**

PROJECT NUMBER: **1413-001-02-501B**

SITE LOCATION: **SEATTLE WA**

SAMPLER SIGNATURE: *[Signature]*

ANALYSIS REQUEST

NUMBER OF SAMPLES	SOIL PROPERTIES PACKAGE	HYDRAULIC CONDUCTIVITY	PORE FLUID SATURATION PACKAGE	TC/Q/TNRCC PROPERTIES PACKAGE	CAPILLARITY PACKAGE	FLUID PROPERTIES PACKAGE	CORE PHOTOGRAPHY	VAPOR TRANSPORT PACKAGE	PERMEABILITY PACKAGE	POROSITY: TOTAL, AIR-FILLED, WATER-FILLED	PROSITY: EFFECTIVE, ASTM D425M	SPECIFIC GRAVITY, ASTM D854	BULK DENSITY (DRY), API RP40 or ASTM D2937	AIR PERMEABILITY, API RP40	HYDRAULIC CONDUCTIVITY, EPA 9100/API RP40 OR ASTM D5084	GRAIN SIZE DISTRIBUTION, ASTM D422 or D4464M	FOUR-WALKLEY-BLACK	ATTERBERG LIMITS, ASTM D4318	VAPOR INTRUSION PACKAGE	FREE PRODUCT MOBILITY PACKAGE
24																X				
25																X				
26																X				
27																X				
28																X	X			

PO #:

BILLING ADDRESS: **SAME AS LEFT**

BILLING EMAIL:

BILLING CONTACT: **BILL HALDEMAN**

BILLING PHONE #: **206 529 3980**

TURNAROUND TIME

24 HOURS	5 DAYS
72 HOURS	NORMAL <input checked="" type="checkbox"/>

OTHERS:

SAMPLE INTEGRITY (CHECK):

INTACT: TEMP (F)

IGL QUOTE NO/DATE

IGL FILE NO **49143**

COMMENTS

24
25
26
27
28

Grab in ziplock bag
"
"
"
"

1. RELINQUISHED BY: *[Signature]*
 COMPANY: **PES ENVIRONMENTAL**
 DATE: **10/9/19** TIME: **0700**

2. RECEIVED BY: **Chidi**
 COMPANY: **IGL Houston**
 DATE: **10/5/19** TIME:

1. RELINQUISHED BY:
 COMPANY:
 DATE: TIME:

2. RECEIVED BY:
 COMPANY:
 DATE: TIME:



5730 Centralcrest St. • Houston, TX 77092
Telephone (713) 316-1800 • Fax (877) 225-9953

October 30, 2017

Bill Haldeman
Project Manager
PES Environmental, Inc.
1215 Fourth Ave., Suite 1350
Seattle, WA 98161

Re: PTS File No: 47413

Dear Mr. Haldeman:

Please find enclosed report for Physical Properties analyses conducted upon samples received from your American Linen, 1413.001.02.602 project. All analyses were performed by applicable ASTM, EPA, or API methodologies. The samples are currently in storage and will be retained for thirty days past completion of testing at no charge. Please note that the samples will be disposed of at that time. You may contact me regarding storage, disposal, or return of the samples

PTS Laboratories appreciates the opportunity to be of service. If you have any questions or require additional information, please contact myself or Emeka Anazodo at (713) 316-1800.

Sincerely,
PTS Laboratories, Inc.

Rick Schweizer

Rick Schweizer
Operations Supervisor

Encl.

Project Name: American Linen
 Project Number: 1413.001.02.602

PTS File No: 47413
 Client: PES Environmental, Inc.

TEST PROGRAM - 20171020

CORE ID	Depth ft.	Core Recovery ft.	Hydraulic Conductivity ASTM D5084	Grain Size Analyses	Dry Bulk Density ASTM D2937	TOC/foc Walkley-Black	Comments
		Grabs.	Vert. 1.5"	Grab	Vert. 1.5"	Grab	
Date Received: 20171004							
B-205-63	63	1		X			Ziplok bag, 1-gallon
B-205-79	79	1				X	Ziplok bag, 1-gallon
B-206-47	47	1		X			Ziplok bag, 1-gallon
B-207-50	50	1		X			Ziplok bag, 1-gallon
B-207-52	52	1				X	Ziplok bag, 1-gallon
B-208-56	56	1		X			Ziplok bag, 1-gallon
B-209-57	57	1		X			Ziplok bag, 1-gallon
B-209-73	73	1				X	Ziplok bag, 1-gallon
B-210-60	60	1		X			Ziplok bag, 1-gallon
B-211-83	83	1		X			Ziplok bag, 1-gallon
B-212-54	54	1		X			Ziplok bag, 1-gallon
B-213-99	99	1		X			Ziplok bag, 1-gallon
B-213-125	125	1				X	Ziplok bag, 1-gallon
B-216-76	76	1		X			Ziplok bag, 1-gallon
B-217-97	97	1		X			Ziplok bag, 1-gallon
B-219-73	73	1		X			Ziplok bag, 1-gallon
MW-132-82	82	1				X	Ziplok bag, 1-gallon
MW-132-53	53	1		X			Ziplok bag, 1-gallon
MW-133-106	106	1		X			Ziplok bag, 1-gallon
MW-135-60-60.5	60-60.5	1	X	X	X		Ziplok bag, 1-gallon
MW-136-77	77	1		X			Ziplok bag, 1-gallon
MW-137-50	50	1		X			Ziplok bag, 1-gallon
MW-137-115	115	1		X			Ziplok bag, 1-gallon
MW-137-90	90	1				X	Ziplok bag, 1-gallon
MW-138-65	65	1		X			Ziplok bag, 1-gallon
MW-138-115	115	1		X			Ziplok bag, 1-gallon
MW-140-80-80.5	80-80.5	1	X	X	X		Ziplok bag, 1-gallon
MW-140-90	90	1		X			Ziplok bag, 1-gallon
MW-139-80	80	1		X			Ziplok bag, 1-gallon
TOTALS:		29	2	23	2	6	29

Laboratory Test Program Notes

Contaminant identification:

Standard TAT for basic analysis is 10-15 business days.

Grain Size Analysis: Laser or sieve method; includes tabular data, graphics and statistical sorting in Excel format.

PTS File No: 47413
 Client: PES Environmental, Inc.
 Report Date: 10/29/17

PHYSICAL PROPERTIES DATA - HYDRAULIC CONDUCTIVITY

(Methodology: API RP 40; ASTM D5084; EPA 9100)

Project Name: American Linen
 Project No: 1413.001.02.602

SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENTATION (1)	ANALYSIS DATE	CONFINING PRESSURE, psi	EFFECTIVE (2,3) PERMEABILITY TO WATER, millidarcy	HYDRAULIC CONDUCTIVITY (2,3), cm/s
MW-135-60-60.5	60.10	N/A	20171026	25	0.983	9.38E-07
					0.976	9.32E-07
					0.970	9.26E-07
					Average:	0.976
MW-140-80-80.5	80.10	N/A	20171026	25	0.879	8.63E-07
					0.869	8.53E-07
					0.872	8.56E-07
					Average:	0.873

(1) Sample Orientation: H = horizontal; V = vertical; R = remold
 (2) Effective (Native) = With as-received pore fluids in place.
 (3) Permeability to water and hydraulic conductivity measured at saturated conditions.
 Water = filtered Laboratory Fresh (tap) or Site water.

PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422)

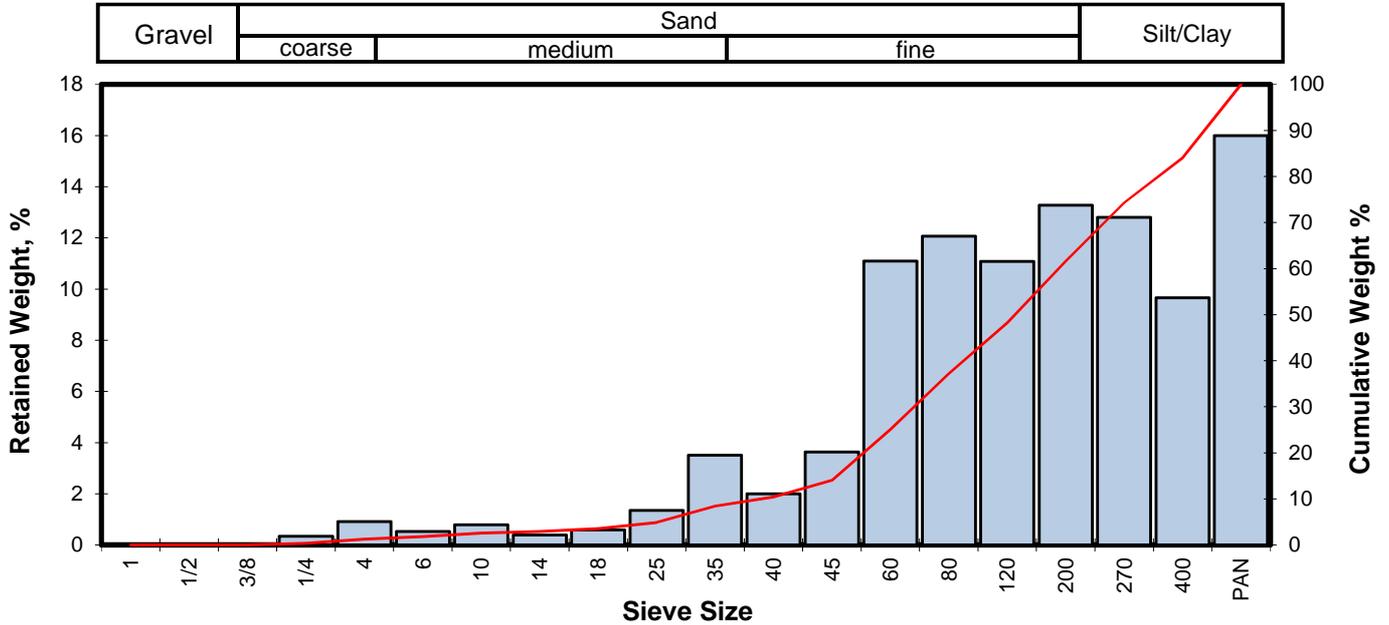
PROJECT NAME: American Linen
 PROJECT NO: 1413.001.02.602

Sample ID	Depth, ft.	Mean Grain Size Description USCS/ASTM (1)	Median Grain Size, mm	Particle Size Distribution, wt. percent				
				Gravel	Sand Size			Silt/Clay
					Coarse	Medium	Fine	
B-205-63	63	Fine Sand	0.117	1.25	1.31	7.83	51.15	38.46
B-206-47	47	Fine Sand	0.150	6.72	3.26	13.70	41.29	35.03
B-207-50	50	Fine Sand	0.176	13.34	2.27	10.53	41.97	31.89
B-208-56	56	Fine Sand	0.162	4.81	2.41	16.09	43.74	32.95
B-209-57	57	Fine Sand	0.134	4.05	2.09	13.60	40.06	40.20
B-210-60	60	Fine Sand	0.105	6.94	0.63	7.03	41.16	44.23
B-211-83	83	Medium Sand	0.624	5.37	2.77	63.76	23.80	4.32
B-213-99	99	Fine Sand	0.406	3.10	2.08	43.10	36.67	15.06
B-216-76	76	Fine Sand	0.163	2.88	1.34	12.14	51.55	32.10
B-217-97	97	Gravel	0.711	32.06	3.77	38.45	18.81	6.91
B-219-73	73	Fine Sand	0.260	4.14	3.96	25.55	43.06	23.29
MW-132-53	53	Fine Sand	0.254	4.38	4.24	24.49	41.08	25.81
MW-133-106	106	Gravel	5.313	52.28	14.61	13.58	12.95	6.59
MW-135-60-60.5	60.25	Medium Sand	0.355	5.97	6.61	32.33	36.11	18.99
MW-137-115	115	Medium Sand	0.410	11.17	3.22	33.65	44.68	7.27
MW-138-65	65	Fine Sand	0.293	9.62	5.50	21.44	46.57	16.87
MW-138-115	115	Medium Sand	0.508	19.728	4.17	35.61	33.29	7.21
MW-140-80-80.5	80.25	Fine Sand	0.130	6.74	2.44	11.27	40.80	38.75
MW-140-90	90	Medium Sand	0.622	18.46	2.32	48.35	28.00	2.87
MW-139-80	80	Fine Sand	0.361	0.32	0.59	37.64	44.49	16.97

(1) Based on Mean from Trask

Client: PES Environmental, Inc.
 Project: American Linen
 Project No: 1413.001.02.602

PTS File No: 47413
 Sample ID: B-205-63
 Depth, ft: 63.00



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.50	0.34	0.34
0.1873	4.757	-2.25	4	1.36	0.92	1.25
0.1324	3.364	-1.75	6	0.78	0.53	1.78
0.0787	2.000	-1.00	10	1.16	0.78	2.56
0.0557	1.414	-0.50	14	0.57	0.38	2.94
0.0394	1.000	0.00	18	0.87	0.59	3.53
0.0278	0.707	0.50	25	2.01	1.35	4.88
0.0197	0.500	1.00	35	5.21	3.51	8.39
0.0166	0.420	1.25	40	2.97	2.00	10.39
0.0139	0.354	1.50	45	5.40	3.64	14.02
0.0098	0.250	2.00	60	16.47	11.09	25.11
0.0070	0.177	2.50	80	17.93	12.07	37.18
0.0049	0.125	3.00	120	16.46	11.08	48.27
0.0029	0.074	3.75	200	19.72	13.28	61.54
0.0021	0.053	4.25	270	19.01	12.80	74.34
0.0015	0.037	4.75	400	14.34	9.65	84.00
			PAN	23.77	16.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	0.52	0.0275	0.699
10	1.20	0.0171	0.435
16	1.59	0.0131	0.332
25	1.99	0.0099	0.251
40	2.63	0.0064	0.162
50	3.10	0.0046	0.117
60	3.66	0.0031	0.079
75	4.28	0.0020	0.051
84	4.75	0.0015	0.037
90	2.97	0.0050	0.128
95	1.48	0.0141	0.357

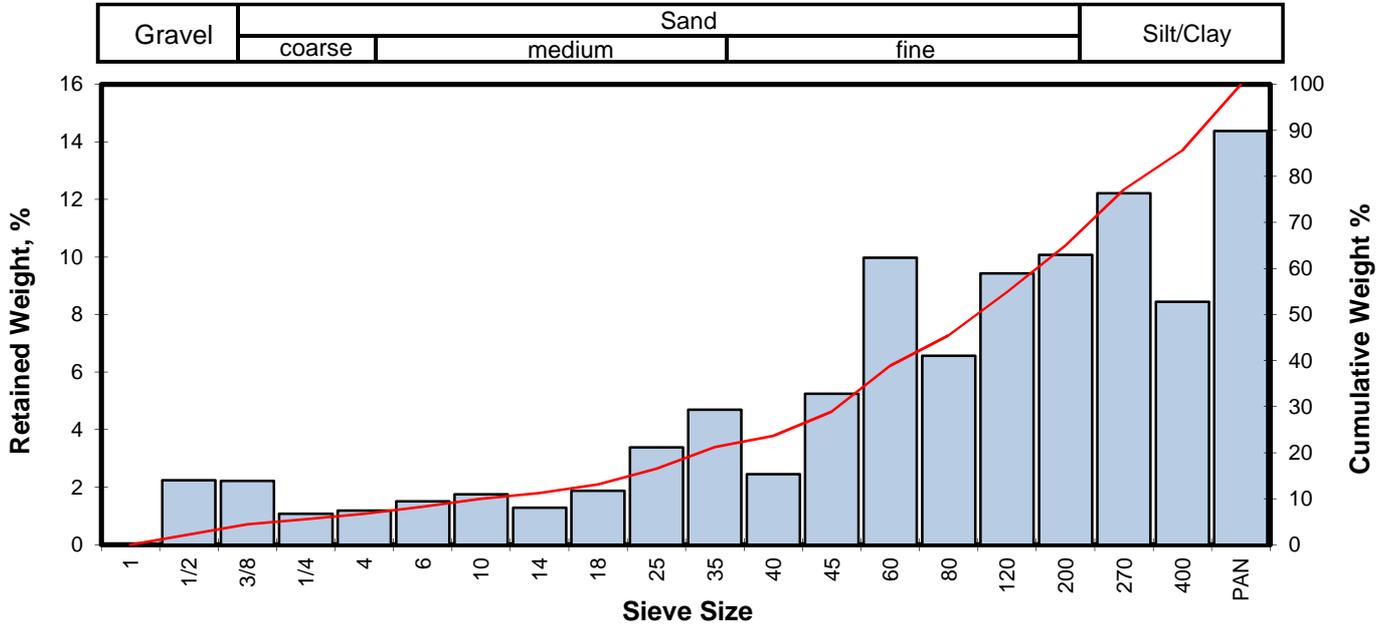
Measure	Trask	Inman	Folk-Ward
Median, phi	3.10	3.10	3.10
Median, in.	0.0046	0.0046	0.0046
Median, mm	0.117	0.117	0.117
Mean, phi	2.73	3.17	3.15
Mean, in.	0.0059	0.0044	0.0044
Mean, mm	0.151	0.111	0.113
Sorting	2.211	1.580	0.936
Skewness	0.972	0.045	-2.146
Kurtosis	0.325	-0.694	0.173
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	1.25
Coarse Sand	10	1.31
Medium Sand	40	7.83
Fine Sand	200	51.15
Silt/Clay	<200	38.46
TOTAL		100

TOTALS				148.53	100.00	100.00
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Client: PES Environmental, Inc.
 Project: American Linen
 Project No: 1413.001.02.602

PTS File No: 47413
 Sample ID: B-206-47
 Depth, ft: 47.00



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	4.45	2.24	2.24
0.3740	9.500	-3.25	3/8	4.40	2.21	4.46
0.2500	6.351	-2.67	1/4	2.14	1.08	5.53
0.1873	4.757	-2.25	4	2.35	1.18	6.72
0.1324	3.364	-1.75	6	2.99	1.51	8.22
0.0787	2.000	-1.00	10	3.49	1.76	9.98
0.0557	1.414	-0.50	14	2.56	1.29	11.27
0.0394	1.000	0.00	18	3.72	1.87	13.14
0.0278	0.707	0.50	25	6.73	3.39	16.53
0.0197	0.500	1.00	35	9.32	4.69	21.22
0.0166	0.420	1.25	40	4.88	2.46	23.67
0.0139	0.354	1.50	45	10.43	5.25	28.93
0.0098	0.250	2.00	60	19.82	9.98	38.90
0.0070	0.177	2.50	80	13.05	6.57	45.47
0.0049	0.125	3.00	120	18.72	9.42	54.90
0.0029	0.074	3.75	200	20.01	10.07	64.97
0.0021	0.053	4.25	270	24.27	12.22	77.19
0.0015	0.037	4.75	400	16.77	8.44	85.63
			PAN	28.55	14.37	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-2.95	0.3051	7.750
10	-0.99	0.0783	1.988
16	0.42	0.0294	0.746
25	1.31	0.0158	0.402
40	2.08	0.0093	0.236
50	2.74	0.0059	0.150
60	3.38	0.0038	0.096
75	4.16	0.0022	0.056
84	4.65	0.0016	0.040
90	3.31	0.0040	0.101
95	1.65	0.0125	0.318

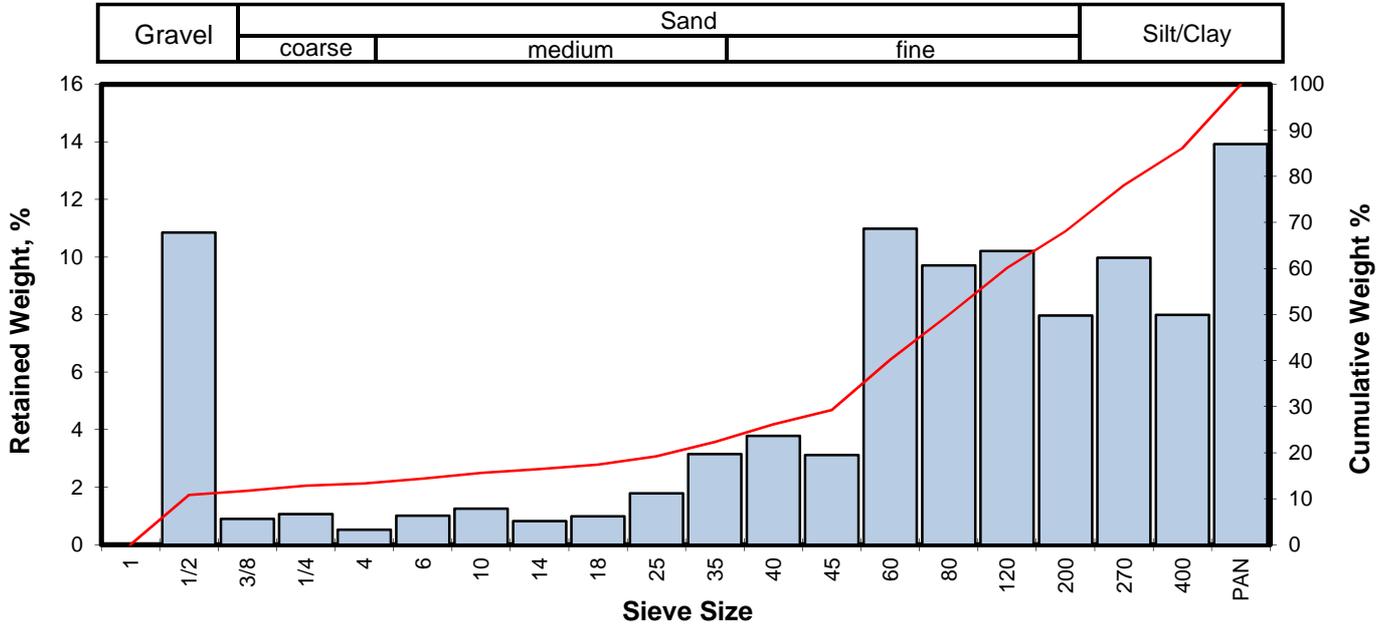
Measure	Trask	Inman	Folk-Ward
Median, phi	2.74	2.74	2.74
Median, in.	0.0059	0.0059	0.0059
Median, mm	0.150	0.150	0.150
Mean, phi	2.13	2.54	2.61
Mean, in.	0.0090	0.0068	0.0065
Mean, mm	0.229	0.172	0.164
Sorting	2.683	2.116	1.756
Skewness	1.002	-0.096	-0.784
Kurtosis	0.092	0.089	0.663
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	6.72
Coarse Sand	10	3.26
Medium Sand	40	13.70
Fine Sand	200	41.29
Silt/Clay	<200	35.03
TOTAL		100

TOTALS	198.65	100.00	100.00
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Client: PES Environmental, Inc.
 Project: American Linen
 Project No: 1413.001.02.602

PTS File No: 47413
 Sample ID: B-207-50
 Depth, ft: 50.00



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	28.03	10.85	10.85
0.3740	9.500	-3.25	3/8	2.31	0.89	11.74
0.2500	6.351	-2.67	1/4	2.76	1.07	12.81
0.1873	4.757	-2.25	4	1.36	0.53	13.34
0.1324	3.364	-1.75	6	2.61	1.01	14.35
0.0787	2.000	-1.00	10	3.25	1.26	15.61
0.0557	1.414	-0.50	14	2.13	0.82	16.43
0.0394	1.000	0.00	18	2.55	0.99	17.42
0.0278	0.707	0.50	25	4.61	1.78	19.20
0.0197	0.500	1.00	35	8.15	3.15	22.36
0.0166	0.420	1.25	40	9.77	3.78	26.14
0.0139	0.354	1.50	45	8.04	3.11	29.25
0.0098	0.250	2.00	60	28.37	10.98	40.24
0.0070	0.177	2.50	80	25.08	9.71	49.94
0.0049	0.125	3.00	120	26.35	10.20	60.14
0.0029	0.074	3.75	200	20.59	7.97	68.11
0.0021	0.053	4.25	270	25.76	9.97	78.09
0.0015	0.037	4.75	400	20.64	7.99	86.08
			PAN	35.97	13.92	100.00
TOTALS				258.33	100.00	100.00

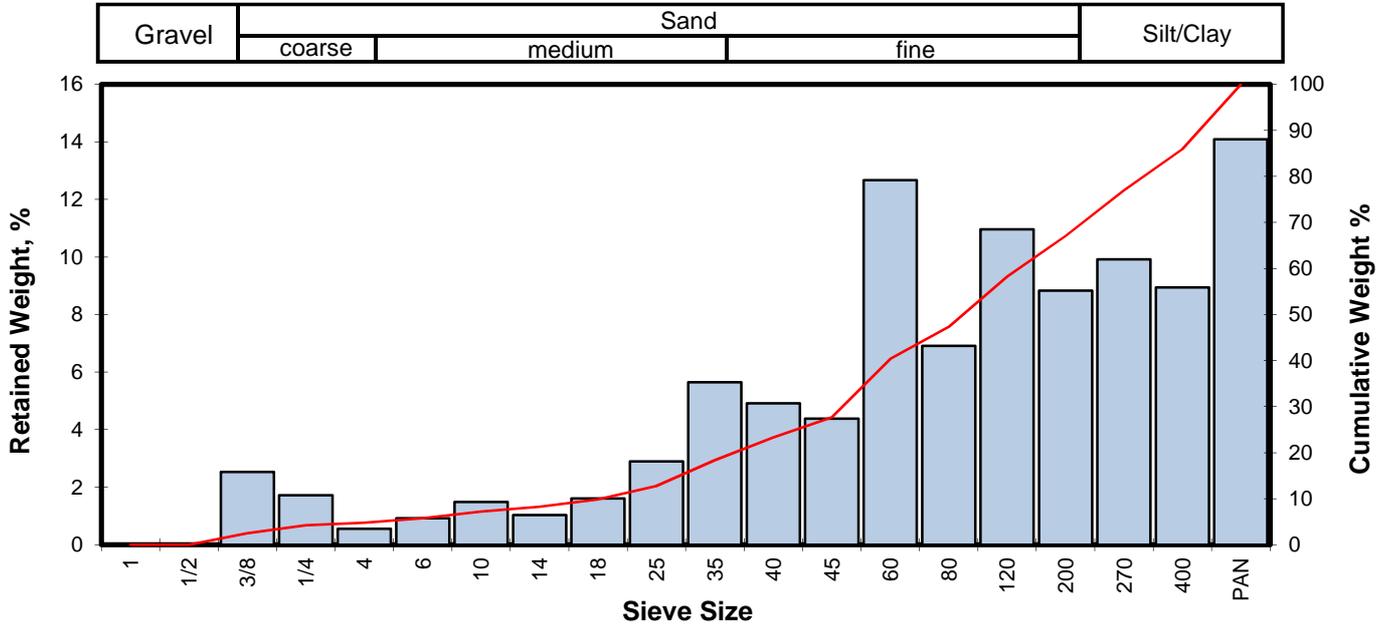
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-4.18	0.7152	18.166
10	-3.72	0.5197	13.199
16	-0.76	0.0668	1.696
25	1.17	0.0174	0.443
40	1.99	0.0099	0.252
50	2.50	0.0069	0.176
60	2.99	0.0049	0.126
75	4.10	0.0023	0.059
84	4.62	0.0016	0.041
90	3.41	0.0037	0.094
95	1.71	0.0121	0.307

Measure	Trask	Inman	Folk-Ward
Median, phi	2.50	2.50	2.50
Median, in.	0.0069	0.0069	0.0069
Median, mm	0.176	0.176	0.176
Mean, phi	2.00	1.93	2.12
Mean, in.	0.0099	0.0103	0.0091
Mean, mm	0.251	0.263	0.230
Sorting	2.752	2.691	2.238
Skewness	0.912	-0.213	-0.742
Kurtosis	0.015	0.094	0.826
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	13.34
Coarse Sand	10	2.27
Medium Sand	40	10.53
Fine Sand	200	41.97
Silt/Clay	<200	31.89
Total		100

Client: PES Environmental, Inc.
 Project: American Linen
 Project No: 1413.001.02.602

PTS File No: 47413
 Sample ID: B-208-56
 Depth, ft: 56.00



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	4.87	2.53	2.53
0.2500	6.351	-2.67	1/4	3.32	1.73	4.26
0.1873	4.757	-2.25	4	1.07	0.56	4.81
0.1324	3.364	-1.75	6	1.77	0.92	5.73
0.0787	2.000	-1.00	10	2.86	1.49	7.22
0.0557	1.414	-0.50	14	1.98	1.03	8.25
0.0394	1.000	0.00	18	3.09	1.61	9.85
0.0278	0.707	0.50	25	5.58	2.90	12.75
0.0197	0.500	1.00	35	10.86	5.64	18.40
0.0166	0.420	1.25	40	9.45	4.91	23.31
0.0139	0.354	1.50	45	8.44	4.39	27.70
0.0098	0.250	2.00	60	24.37	12.67	40.36
0.0070	0.177	2.50	80	13.29	6.91	47.27
0.0049	0.125	3.00	120	21.08	10.96	58.23
0.0029	0.074	3.75	200	16.98	8.83	67.05
0.0021	0.053	4.25	270	19.09	9.92	76.98
0.0015	0.037	4.75	400	17.20	8.94	85.91
			PAN	27.10	14.09	100.00
TOTALS				192.40	100.00	100.00

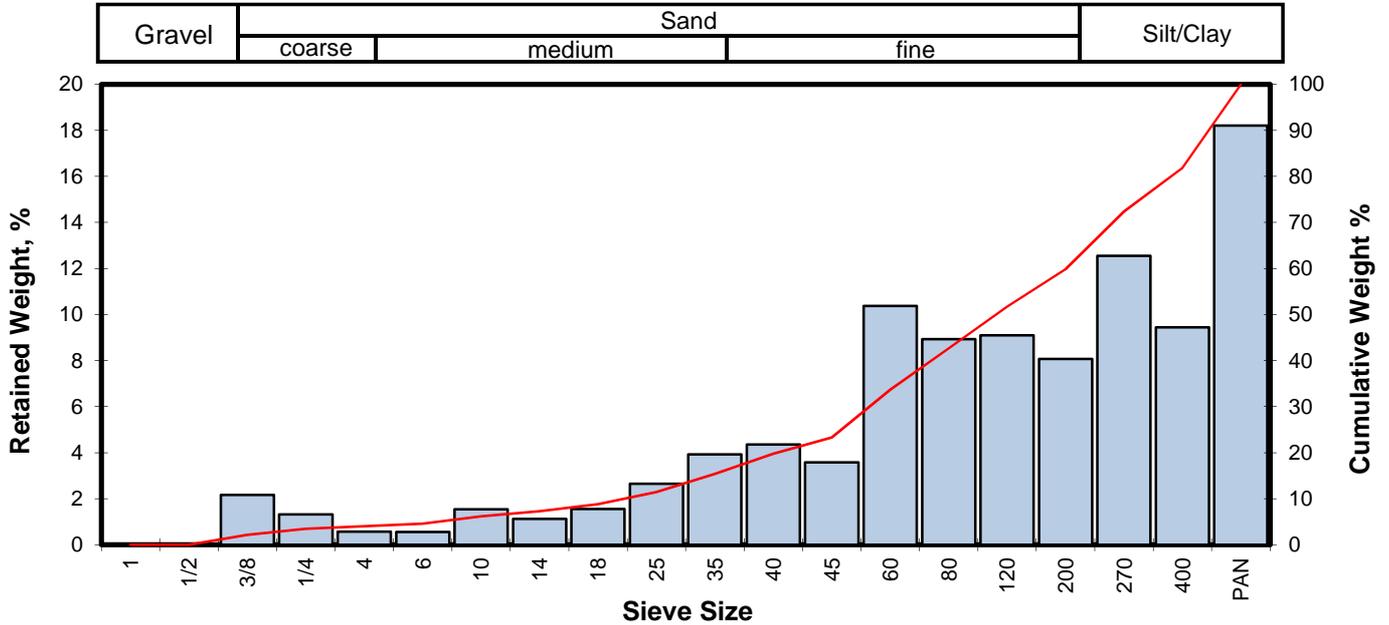
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-2.15	0.1745	4.433
10	0.03	0.0387	0.983
16	0.79	0.0228	0.579
25	1.35	0.0155	0.393
40	1.99	0.0099	0.253
50	2.62	0.0064	0.162
60	3.15	0.0044	0.113
75	4.15	0.0022	0.056
84	4.64	0.0016	0.040
90	3.37	0.0038	0.097
95	1.69	0.0122	0.311

Measure	Trask	Inman	Folk-Ward
Median, phi	2.62	2.62	2.62
Median, in.	0.0064	0.0064	0.0064
Median, mm	0.162	0.162	0.162
Mean, phi	2.15	2.72	2.68
Mean, in.	0.0089	0.0060	0.0061
Mean, mm	0.225	0.152	0.156
Sorting	2.643	1.928	1.545
Skewness	0.918	0.047	-0.721
Kurtosis	0.190	-0.005	0.560
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	4.81
Coarse Sand	10	2.41
Medium Sand	40	16.09
Fine Sand	200	43.74
Silt/Clay	<200	32.95
Total		100

Client: PES Environmental, Inc.
 Project: American Linen
 Project No: 1413.001.02.602

PTS File No: 47413
 Sample ID: B-209-57
 Depth, ft: 57.00



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	3.66	2.16	2.16
0.2500	6.351	-2.67	1/4	2.23	1.32	3.48
0.1873	4.757	-2.25	4	0.96	0.57	4.05
0.1324	3.364	-1.75	6	0.94	0.56	4.61
0.0787	2.000	-1.00	10	2.60	1.54	6.14
0.0557	1.414	-0.50	14	1.89	1.12	7.26
0.0394	1.000	0.00	18	2.62	1.55	8.81
0.0278	0.707	0.50	25	4.48	2.65	11.46
0.0197	0.500	1.00	35	6.63	3.92	15.38
0.0166	0.420	1.25	40	7.37	4.36	19.74
0.0139	0.354	1.50	45	6.06	3.58	23.32
0.0098	0.250	2.00	60	17.54	10.37	33.70
0.0070	0.177	2.50	80	15.10	8.93	42.63
0.0049	0.125	3.00	120	15.39	9.10	51.73
0.0029	0.074	3.75	200	13.65	8.07	59.80
0.0021	0.053	4.25	270	21.22	12.55	72.35
0.0015	0.037	4.75	400	15.97	9.44	81.80
			PAN	30.78	18.20	100.00
TOTALS				169.09	100.00	100.00

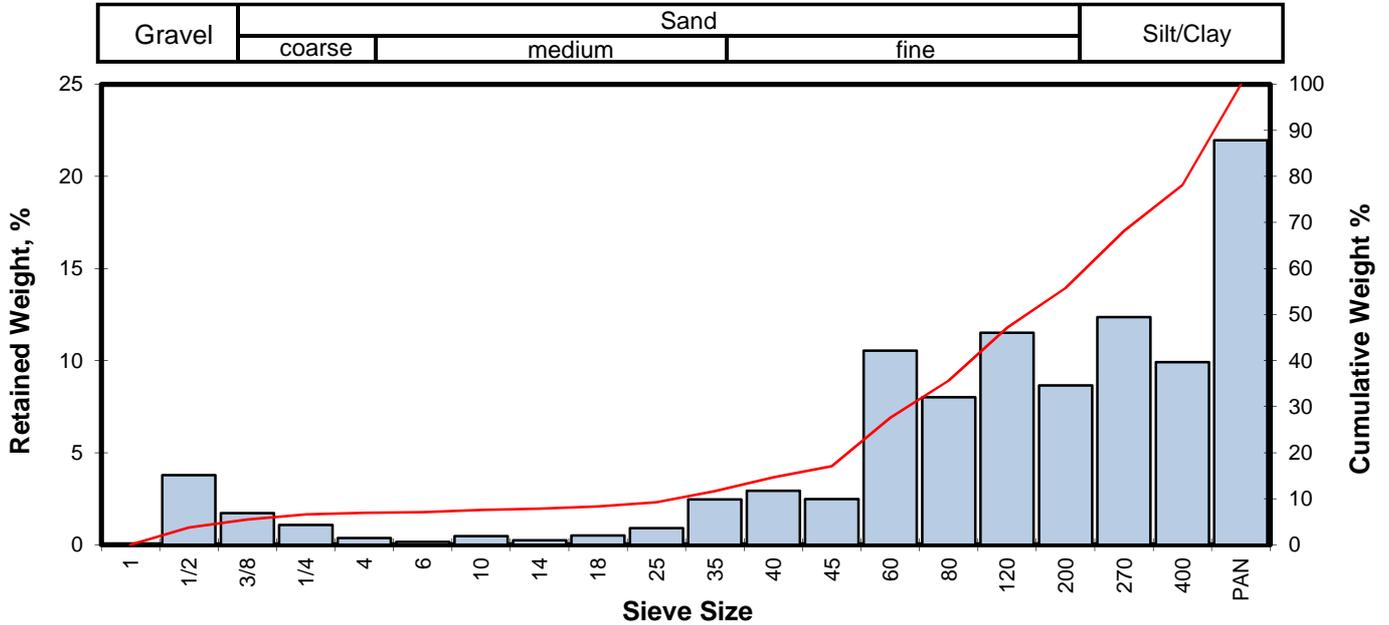
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-1.56	0.1159	2.945
10	0.22	0.0337	0.856
16	1.04	0.0192	0.488
25	1.58	0.0132	0.334
40	2.35	0.0077	0.196
50	2.90	0.0053	0.134
60	3.76	0.0029	0.074
75	4.39	0.0019	0.048
84	4.18	0.0022	0.055
90	2.61	0.0065	0.164
95	1.30	0.0159	0.405

Measure	Trask	Inman	Folk-Ward
Median, phi	2.90	2.90	2.90
Median, in.	0.0053	0.0053	0.0053
Median, mm	0.134	0.134	0.134
Mean, phi	2.39	2.61	2.71
Mean, in.	0.0075	0.0065	0.0060
Mean, mm	0.191	0.164	0.153
Sorting	2.648	1.570	1.219
Skewness	0.946	-0.191	-1.154
Kurtosis	0.207	-0.088	0.418
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	4.05
Coarse Sand	10	2.09
Medium Sand	40	13.60
Fine Sand	200	40.06
Silt/Clay	<200	40.20
Total		100

Client: PES Environmental, Inc.
 Project: American Linen
 Project No: 1413.001.02.602

PTS File No: 47413
 Sample ID: B-210-60
 Depth, ft: 60.00



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	5.28	3.78	3.78
0.3740	9.500	-3.25	3/8	2.40	1.72	5.49
0.2500	6.351	-2.67	1/4	1.51	1.08	6.57
0.1873	4.757	-2.25	4	0.51	0.36	6.94
0.1324	3.364	-1.75	6	0.23	0.16	7.10
0.0787	2.000	-1.00	10	0.65	0.47	7.57
0.0557	1.414	-0.50	14	0.34	0.24	7.81
0.0394	1.000	0.00	18	0.70	0.50	8.31
0.0278	0.707	0.50	25	1.26	0.90	9.21
0.0197	0.500	1.00	35	3.44	2.46	11.68
0.0166	0.420	1.25	40	4.09	2.93	14.60
0.0139	0.354	1.50	45	3.47	2.48	17.08
0.0098	0.250	2.00	60	14.72	10.53	27.61
0.0070	0.177	2.50	80	11.19	8.01	35.62
0.0049	0.125	3.00	120	16.08	11.50	47.12
0.0029	0.074	3.75	200	12.08	8.64	55.77
0.0021	0.053	4.25	270	17.28	12.36	68.13
0.0015	0.037	4.75	400	13.85	9.91	78.04
			PAN	30.70	21.96	100.00
TOTALS				139.78	100.00	100.00

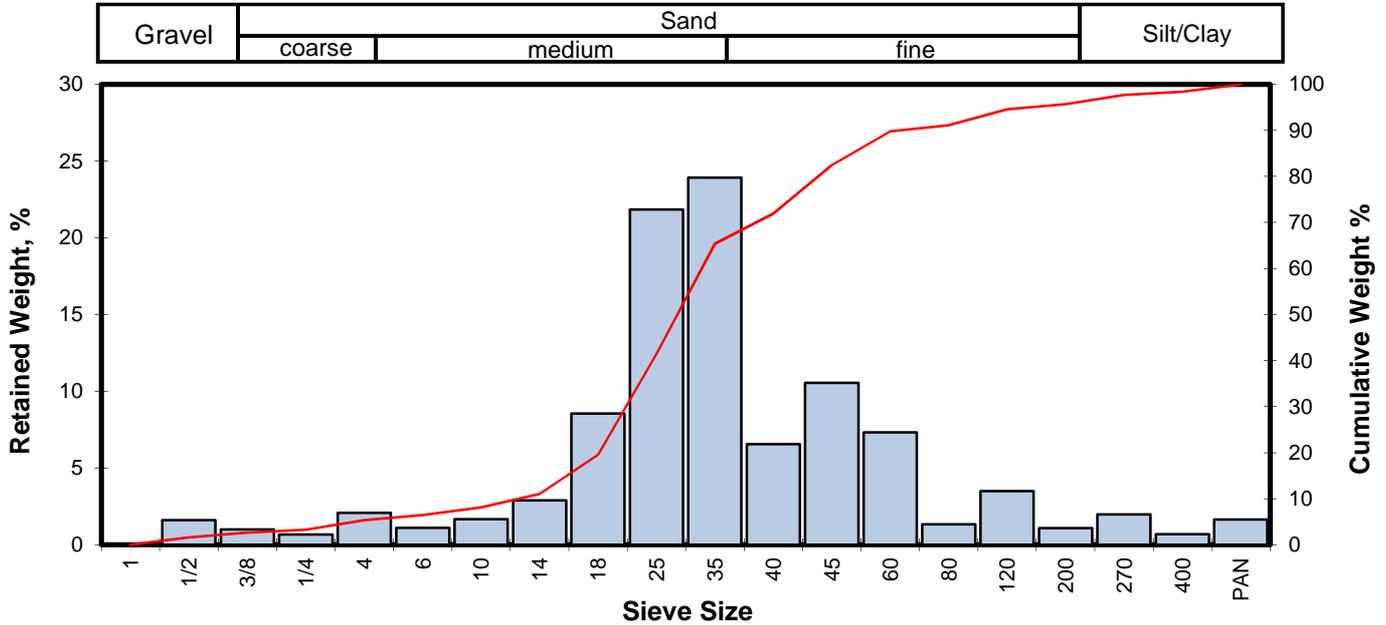
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-3.36	0.4048	10.282
10	0.66	0.0249	0.633
16	1.39	0.0150	0.381
25	1.88	0.0107	0.272
40	2.69	0.0061	0.155
50	3.25	0.0041	0.105
60	3.92	0.0026	0.066
75	4.60	0.0016	0.041
84	3.46	0.0036	0.091
90	2.16	0.0088	0.223
95	1.08	0.0186	0.473

Measure	Trask	Inman	Folk-Ward
Median, phi	3.25	3.25	3.25
Median, in.	0.0041	0.0041	0.0041
Median, mm	0.105	0.105	0.105
Mean, phi	2.67	2.43	2.70
Mean, in.	0.0062	0.0073	0.0061
Mean, mm	0.157	0.186	0.154
Sorting	2.568	1.035	1.191
Skewness	1.009	-0.796	-1.386
Kurtosis	0.282	1.147	0.669
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	6.94
Coarse Sand	10	0.63
Medium Sand	40	7.03
Fine Sand	200	41.16
Silt/Clay	<200	44.23
Total		100

Client: PES Environmental, Inc.
 Project: American Linen
 Project No: 1413.001.02.602

PTS File No: 47413
 Sample ID: B-211-83
 Depth, ft: 83.00



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	3.27	1.61	1.61
0.3740	9.500	-3.25	3/8	2.03	1.00	2.61
0.2500	6.351	-2.67	1/4	1.37	0.67	3.28
0.1873	4.757	-2.25	4	4.24	2.09	5.37
0.1324	3.364	-1.75	6	2.24	1.10	6.47
0.0787	2.000	-1.00	10	3.38	1.66	8.13
0.0557	1.414	-0.50	14	5.89	2.90	11.03
0.0394	1.000	0.00	18	17.38	8.55	19.58
0.0278	0.707	0.50	25	44.38	21.84	41.42
0.0197	0.500	1.00	35	48.62	23.92	65.34
0.0166	0.420	1.25	40	13.30	6.54	71.89
0.0139	0.354	1.50	45	21.44	10.55	82.44
0.0098	0.250	2.00	60	14.89	7.33	89.77
0.0070	0.177	2.50	80	2.70	1.33	91.09
0.0049	0.125	3.00	120	7.12	3.50	94.60
0.0029	0.074	3.75	200	2.21	1.09	95.68
0.0021	0.053	4.25	270	4.02	1.98	97.66
0.0015	0.037	4.75	400	1.41	0.69	98.36
			PAN	3.34	1.64	100.00
TOTALS				203.23	100.00	100.00

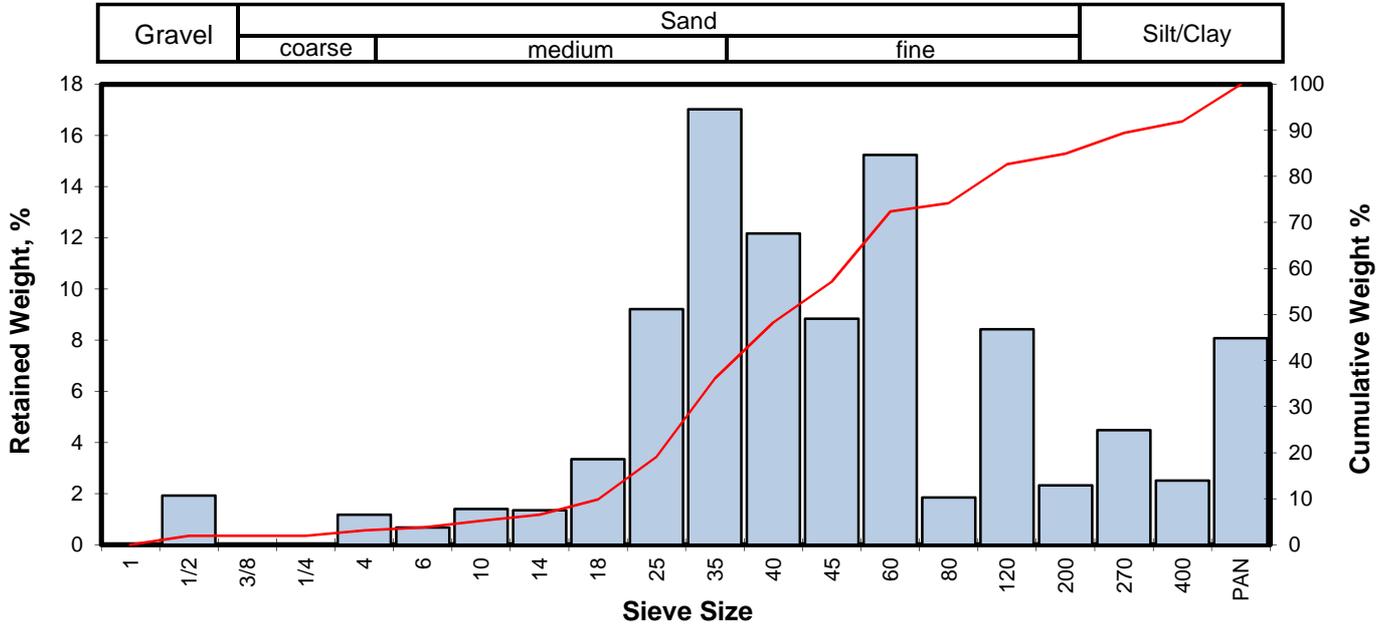
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-2.32	0.1971	5.006
10	-0.68	0.0630	1.600
16	-0.21	0.0455	1.156
25	0.12	0.0361	0.918
40	0.47	0.0285	0.723
50	0.68	0.0246	0.624
60	0.89	0.0213	0.540
75	1.32	0.0157	0.400
84	1.61	0.0129	0.328
90	2.09	0.0093	0.235
95	3.28	0.0041	0.103

Measure	Trask	Inman	Folk-Ward
Median, phi	0.68	0.68	0.68
Median, in.	0.0246	0.0246	0.0246
Median, mm	0.624	0.624	0.624
Mean, phi	0.60	0.70	0.69
Mean, in.	0.0259	0.0243	0.0244
Mean, mm	0.659	0.616	0.619
Sorting	1.516	0.908	1.303
Skewness	0.970	0.021	-0.026
Kurtosis	0.190	2.084	1.914
Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	5.37
Coarse Sand	10	2.77
Medium Sand	40	63.76
Fine Sand	200	23.80
Silt/Clay	<200	4.32
Total		100

Client: PES Environmental, Inc.
 Project: American Linen
 Project No: 1413.001.02.602

PTS File No: 47413
 Sample ID: B-213-99
 Depth, ft: 99.00



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	3.53	1.93	1.93
0.3740	9.500	-3.25	3/8	0.00	0.00	1.93
0.2500	6.351	-2.67	1/4	0.00	0.00	1.93
0.1873	4.757	-2.25	4	2.14	1.17	3.10
0.1324	3.364	-1.75	6	1.23	0.67	3.77
0.0787	2.000	-1.00	10	2.57	1.40	5.17
0.0557	1.414	-0.50	14	2.47	1.35	6.52
0.0394	1.000	0.00	18	6.13	3.35	9.87
0.0278	0.707	0.50	25	16.86	9.21	19.08
0.0197	0.500	1.00	35	31.17	17.02	36.10
0.0166	0.420	1.25	40	22.28	12.17	48.27
0.0139	0.354	1.50	45	16.18	8.84	57.11
0.0098	0.250	2.00	60	27.90	15.24	72.35
0.0070	0.177	2.50	80	3.38	1.85	74.19
0.0049	0.125	3.00	120	15.42	8.42	82.62
0.0029	0.074	3.75	200	4.26	2.33	84.94
0.0021	0.053	4.25	270	8.20	4.48	89.42
0.0015	0.037	4.75	400	4.59	2.51	91.93
			PAN	14.78	8.07	100.00
TOTALS				183.09	100.00	100.00

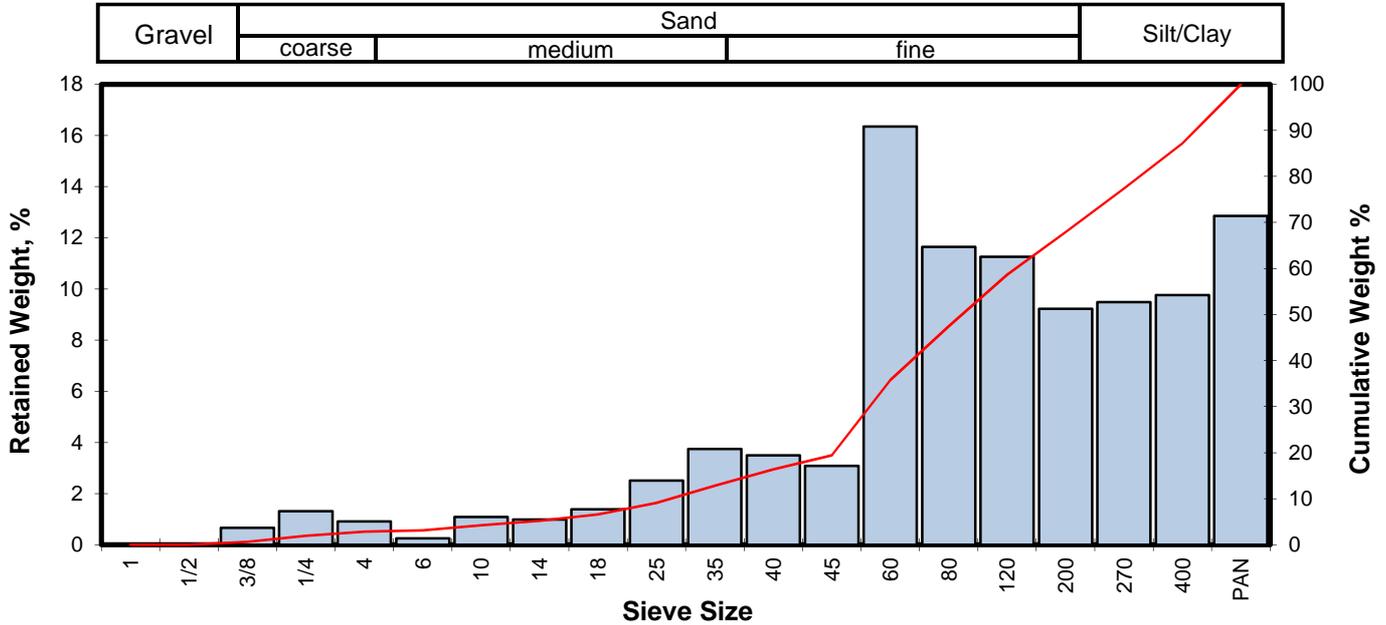
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-1.09	0.0839	2.132
10	0.01	0.0392	0.995
16	0.33	0.0313	0.794
25	0.67	0.0247	0.627
40	1.08	0.0186	0.473
50	1.30	0.0160	0.406
60	1.59	0.0130	0.331
75	2.55	0.0067	0.171
84	3.45	0.0036	0.092
90	4.37	0.0019	0.049
95	2.94	0.0051	0.130

Measure	Trask	Inman	Folk-Ward
Median, phi	1.30	1.30	1.30
Median, in.	0.0160	0.0160	0.0160
Median, mm	0.406	0.406	0.406
Mean, phi	1.33	1.89	1.69
Mean, in.	0.0157	0.0106	0.0122
Mean, mm	0.399	0.270	0.309
Sorting	1.915	1.557	1.390
Skewness	0.806	0.379	0.097
Kurtosis	0.241	0.296	0.882
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	3.10
Coarse Sand	10	2.08
Medium Sand	40	43.10
Fine Sand	200	36.67
Silt/Clay	<200	15.06
Total		100

Client: PES Environmental, Inc.
 Project: American Linen
 Project No: 1413.001.02.602

PTS File No: 47413
 Sample ID: B-216-76
 Depth, ft: 76.00



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	1.17	0.66	0.66
0.2500	6.351	-2.67	1/4	2.32	1.31	1.97
0.1873	4.757	-2.25	4	1.61	0.91	2.88
0.1324	3.364	-1.75	6	0.44	0.25	3.12
0.0787	2.000	-1.00	10	1.93	1.09	4.21
0.0557	1.414	-0.50	14	1.76	0.99	5.20
0.0394	1.000	0.00	18	2.46	1.39	6.59
0.0278	0.707	0.50	25	4.46	2.51	9.10
0.0197	0.500	1.00	35	6.65	3.75	12.85
0.0166	0.420	1.25	40	6.20	3.50	16.35
0.0139	0.354	1.50	45	5.48	3.09	19.44
0.0098	0.250	2.00	60	29.00	16.35	35.79
0.0070	0.177	2.50	80	20.65	11.64	47.43
0.0049	0.125	3.00	120	19.96	11.25	58.68
0.0029	0.074	3.75	200	16.35	9.22	67.90
0.0021	0.053	4.25	270	16.82	9.48	77.38
0.0015	0.037	4.75	400	17.32	9.76	87.14
			PAN	22.81	12.86	100.00
TOTALS				177.39	100.00	100.00

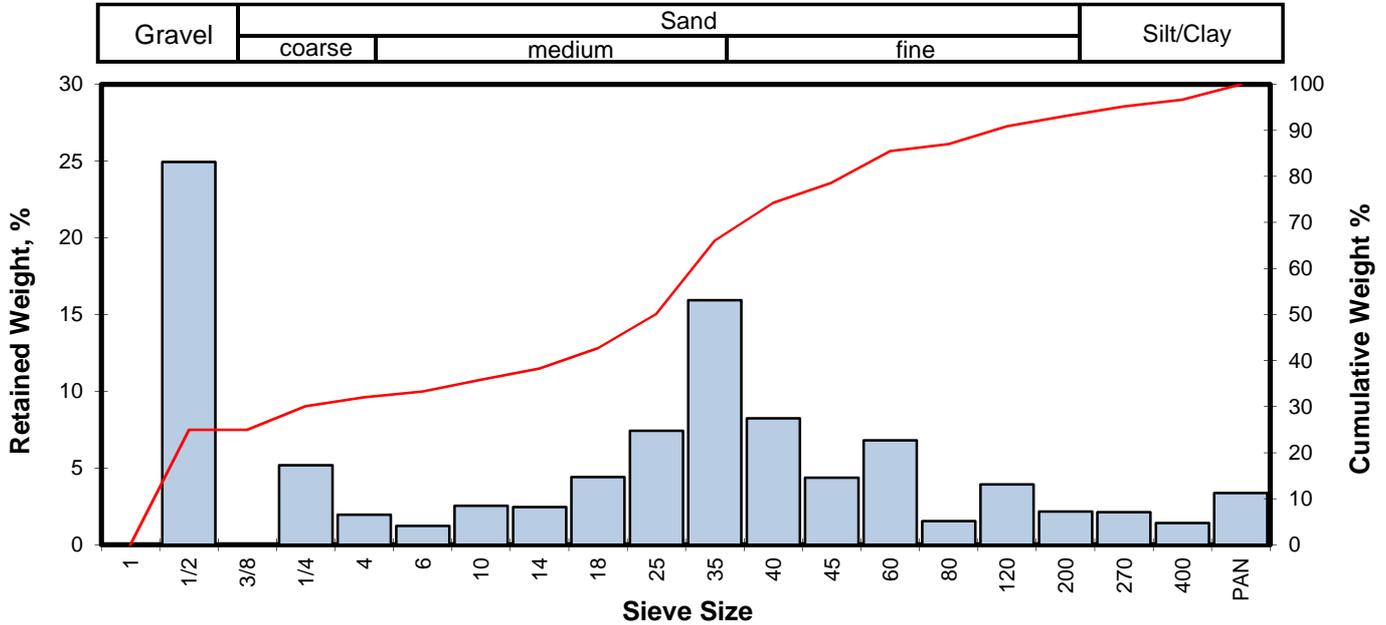
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-0.60	0.0598	1.518
10	0.62	0.0256	0.651
16	1.23	0.0168	0.428
25	1.67	0.0124	0.314
40	2.18	0.0087	0.221
50	2.61	0.0064	0.163
60	3.11	0.0046	0.116
75	4.12	0.0023	0.057
84	4.59	0.0016	0.042
90	3.69	0.0030	0.077
95	1.85	0.0109	0.278

Measure	Trask	Inman	Folk-Ward
Median, phi	2.61	2.61	2.61
Median, in.	0.0064	0.0064	0.0064
Median, mm	0.163	0.163	0.163
Mean, phi	2.43	2.91	2.81
Mean, in.	0.0073	0.0052	0.0056
Mean, mm	0.186	0.133	0.143
Sorting	2.341	1.682	1.212
Skewness	0.822	0.174	-0.726
Kurtosis	0.224	-0.272	0.409
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	2.88
Coarse Sand	10	1.34
Medium Sand	40	12.14
Fine Sand	200	51.55
Silt/Clay	<200	32.10
Total		100

Client: PES Environmental, Inc.
 Project: American Linen
 Project No: 1413.001.02.602

PTS File No: 47413
 Sample ID: B-217-97
 Depth, ft: 97.00



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	59.23	24.94	24.94
0.3740	9.500	-3.25	3/8	0.00	0.00	24.94
0.2500	6.351	-2.67	1/4	12.28	5.17	30.11
0.1873	4.757	-2.25	4	4.63	1.95	32.06
0.1324	3.364	-1.75	6	2.94	1.24	33.30
0.0787	2.000	-1.00	10	6.01	2.53	35.83
0.0557	1.414	-0.50	14	5.82	2.45	38.28
0.0394	1.000	0.00	18	10.47	4.41	42.69
0.0278	0.707	0.50	25	17.63	7.42	50.12
0.0197	0.500	1.00	35	37.85	15.94	66.05
0.0166	0.420	1.25	40	19.54	8.23	74.28
0.0139	0.354	1.50	45	10.36	4.36	78.65
0.0098	0.250	2.00	60	16.16	6.81	85.45
0.0070	0.177	2.50	80	3.64	1.53	86.98
0.0049	0.125	3.00	120	9.36	3.94	90.93
0.0029	0.074	3.75	200	5.14	2.16	93.09
0.0021	0.053	4.25	270	5.03	2.12	95.21
0.0015	0.037	4.75	400	3.36	1.41	96.62
			PAN	8.02	3.38	100.00
TOTALS				237.47	100.00	100.00

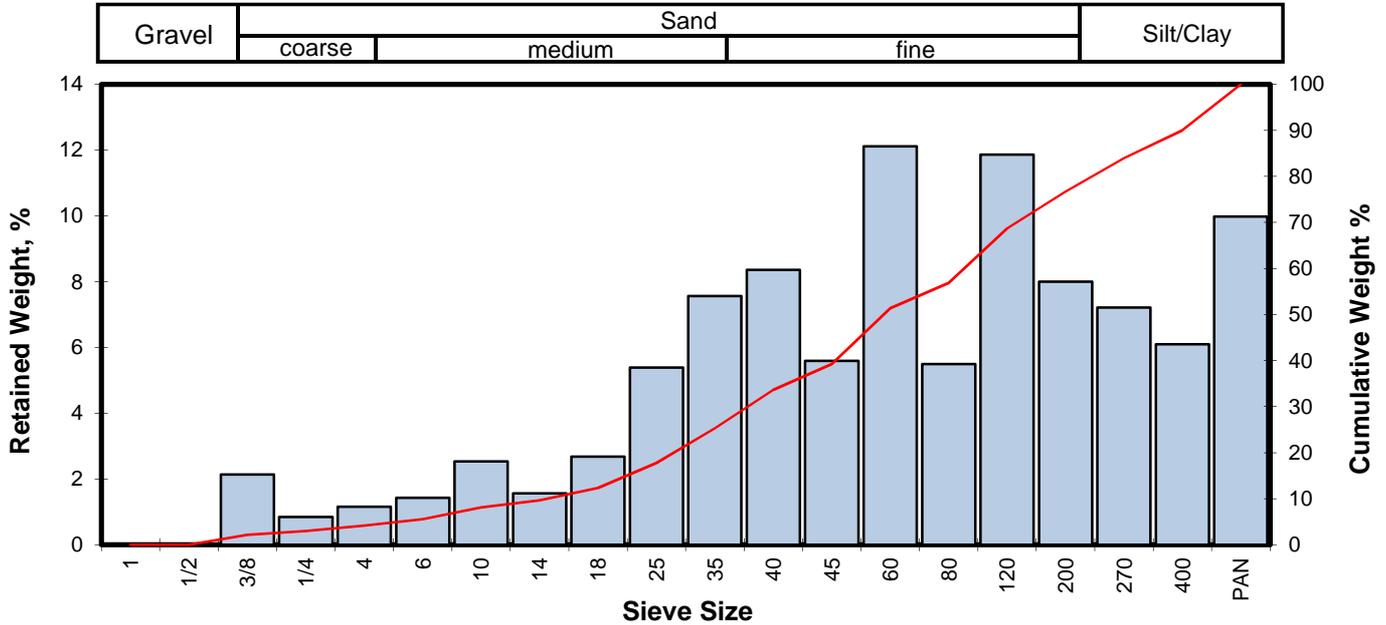
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-4.36	0.8108	20.594
10	-4.08	0.6678	16.963
16	-3.75	0.5291	13.440
25	-3.24	0.3724	9.458
40	-0.31	0.0486	1.236
50	0.49	0.0280	0.711
60	0.81	0.0225	0.570
75	1.29	0.0161	0.409
84	1.89	0.0106	0.269
90	2.88	0.0053	0.136
95	4.20	0.0021	0.054

Measure	Trask	Inman	Folk-Ward
Median, phi	0.49	0.49	0.49
Median, in.	0.0280	0.0280	0.0280
Median, mm	0.711	0.711	0.711
Mean, phi	-2.30	-0.93	-0.45
Mean, in.	0.1942	0.0749	0.0539
Mean, mm	4.933	1.902	1.370
Sorting	4.811	2.821	2.708
Skewness	2.765	-0.503	-0.319
Kurtosis	0.269	0.518	0.774
Grain Size Description (ASTM-USCS Scale)	Gravel (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	32.06
Coarse Sand	10	3.77
Medium Sand	40	38.45
Fine Sand	200	18.81
Silt/Clay	<200	6.91
Total		100

Client: PES Environmental, Inc.
 Project: American Linen
 Project No: 1413.001.02.602

PTS File No: 47413
 Sample ID: B-219-73
 Depth, ft: 73.00



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	3.23	2.14	2.14
0.2500	6.351	-2.67	1/4	1.28	0.85	2.99
0.1873	4.757	-2.25	4	1.74	1.15	4.14
0.1324	3.364	-1.75	6	2.15	1.42	5.56
0.0787	2.000	-1.00	10	3.83	2.54	8.10
0.0557	1.414	-0.50	14	2.36	1.56	9.66
0.0394	1.000	0.00	18	4.04	2.68	12.34
0.0278	0.707	0.50	25	8.13	5.39	17.73
0.0197	0.500	1.00	35	11.42	7.56	25.29
0.0166	0.420	1.25	40	12.62	8.36	33.65
0.0139	0.354	1.50	45	8.44	5.59	39.24
0.0098	0.250	2.00	60	18.29	12.11	51.35
0.0070	0.177	2.50	80	8.30	5.50	56.85
0.0049	0.125	3.00	120	17.91	11.86	68.72
0.0029	0.074	3.75	200	12.07	7.99	76.71
0.0021	0.053	4.25	270	10.89	7.21	83.92
0.0015	0.037	4.75	400	9.20	6.09	90.02
			PAN	15.07	9.98	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-1.95	0.1519	3.858
10	-0.44	0.0533	1.354
16	0.34	0.0311	0.790
25	0.98	0.0199	0.507
40	1.53	0.0136	0.346
50	1.94	0.0102	0.260
60	2.63	0.0063	0.161
75	3.59	0.0033	0.083
84	4.26	0.0021	0.052
90	4.75	0.0015	0.037
95	2.38	0.0076	0.192

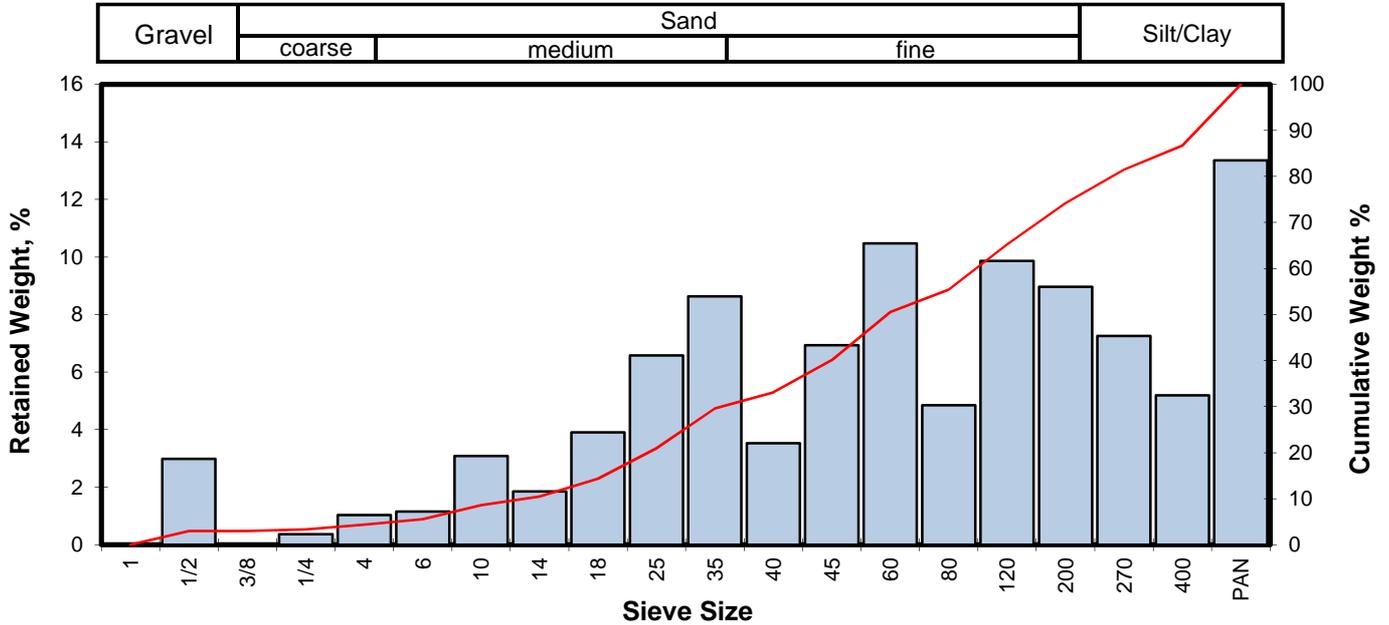
Measure	Trask	Inman	Folk-Ward
Median, phi	1.94	1.94	1.94
Median, in.	0.0102	0.0102	0.0102
Median, mm	0.260	0.260	0.260
Mean, phi	1.76	2.30	2.18
Mean, in.	0.0116	0.0080	0.0087
Mean, mm	0.295	0.203	0.221
Sorting	2.470	1.958	1.635
Skewness	0.789	0.181	-0.309
Kurtosis	0.161	0.105	0.680
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	4.14
Coarse Sand	10	3.96
Medium Sand	40	25.55
Fine Sand	200	43.06
Silt/Clay	<200	23.29
TOTALS	Total	100

TOTALS	150.97	100.00	100.00
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Client: PES Environmental, Inc.
 Project: American Linen
 Project No: 1413.001.02.602

PTS File No: 47413
 Sample ID: MW-132-53
 Depth, ft: 53.00



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	5.62	2.98	2.98
0.3740	9.500	-3.25	3/8	0.00	0.00	2.98
0.2500	6.351	-2.67	1/4	0.69	0.37	3.35
0.1873	4.757	-2.25	4	1.94	1.03	4.38
0.1324	3.364	-1.75	6	2.18	1.16	5.53
0.0787	2.000	-1.00	10	5.82	3.09	8.62
0.0557	1.414	-0.50	14	3.50	1.86	10.48
0.0394	1.000	0.00	18	7.36	3.90	14.38
0.0278	0.707	0.50	25	12.39	6.57	20.96
0.0197	0.500	1.00	35	16.26	8.63	29.58
0.0166	0.420	1.25	40	6.64	3.52	33.11
0.0139	0.354	1.50	45	13.07	6.93	40.04
0.0098	0.250	2.00	60	19.74	10.47	50.51
0.0070	0.177	2.50	80	9.14	4.85	55.36
0.0049	0.125	3.00	120	18.58	9.86	65.22
0.0029	0.074	3.75	200	16.90	8.97	74.19
0.0021	0.053	4.25	270	13.68	7.26	81.45
0.0015	0.037	4.75	400	9.79	5.19	86.64
			PAN	25.18	13.36	100.00
TOTALS				188.48	100.00	100.00

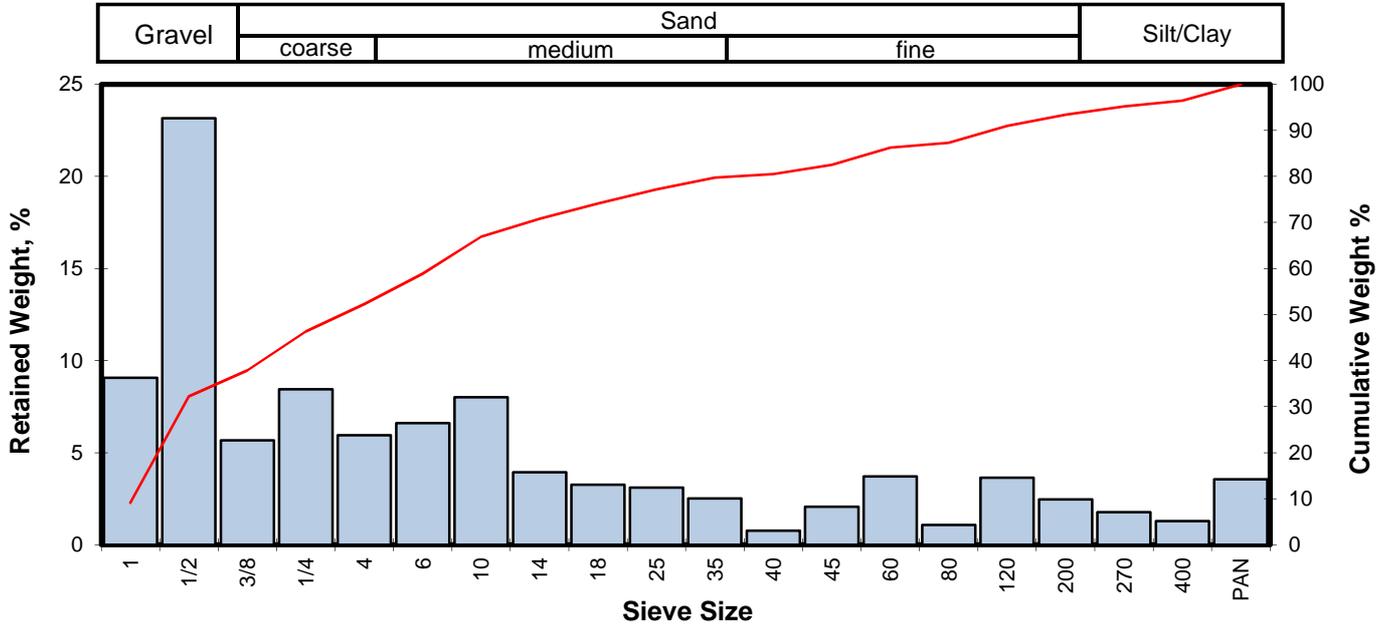
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-1.98	0.1554	3.947
10	-0.63	0.0609	1.546
16	0.12	0.0362	0.918
25	0.73	0.0237	0.601
40	1.50	0.0139	0.354
50	1.98	0.0100	0.254
60	2.74	0.0059	0.150
75	3.81	0.0028	0.071
84	4.50	0.0017	0.044
90	3.56	0.0033	0.085
95	1.78	0.0115	0.292

Measure	Trask	Inman	Folk-Ward
Median, phi	1.98	1.98	1.98
Median, in.	0.0100	0.0100	0.0100
Median, mm	0.254	0.254	0.254
Mean, phi	1.57	2.31	2.20
Mean, in.	0.0132	0.0079	0.0086
Mean, mm	0.336	0.202	0.218
Sorting	2.899	2.186	1.663
Skewness	0.815	0.153	-0.476
Kurtosis	0.181	-0.140	0.501
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	4.38
Coarse Sand	10	4.24
Medium Sand	40	24.49
Fine Sand	200	41.08
Silt/Clay	<200	25.81
Total		100

Client: PES Environmental, Inc.
 Project: American Linen
 Project No: 1413.001.02.602

PTS File No: 47413
 Sample ID: MW-133-106
 Depth, ft: 106.00



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	33.61	9.06	9.06
0.4922	12.501	-3.64	1/2	85.91	23.16	32.21
0.3740	9.500	-3.25	3/8	21.06	5.68	37.89
0.2500	6.351	-2.67	1/4	31.31	8.44	46.33
0.1873	4.757	-2.25	4	22.07	5.95	52.28
0.1324	3.364	-1.75	6	24.50	6.60	58.88
0.0787	2.000	-1.00	10	29.69	8.00	66.88
0.0557	1.414	-0.50	14	14.59	3.93	70.82
0.0394	1.000	0.00	18	12.11	3.26	74.08
0.0278	0.707	0.50	25	11.51	3.10	77.18
0.0197	0.500	1.00	35	9.34	2.52	79.70
0.0166	0.420	1.25	40	2.82	0.76	80.46
0.0139	0.354	1.50	45	7.63	2.06	82.52
0.0098	0.250	2.00	60	13.75	3.71	86.22
0.0070	0.177	2.50	80	3.99	1.08	87.30
0.0049	0.125	3.00	120	13.52	3.64	90.94
0.0029	0.074	3.75	200	9.15	2.47	93.41
0.0021	0.053	4.25	270	6.54	1.76	95.17
0.0015	0.037	4.75	400	4.74	1.28	96.45
			PAN	13.18	3.55	100.00
TOTALS				371.02	100.00	100.00

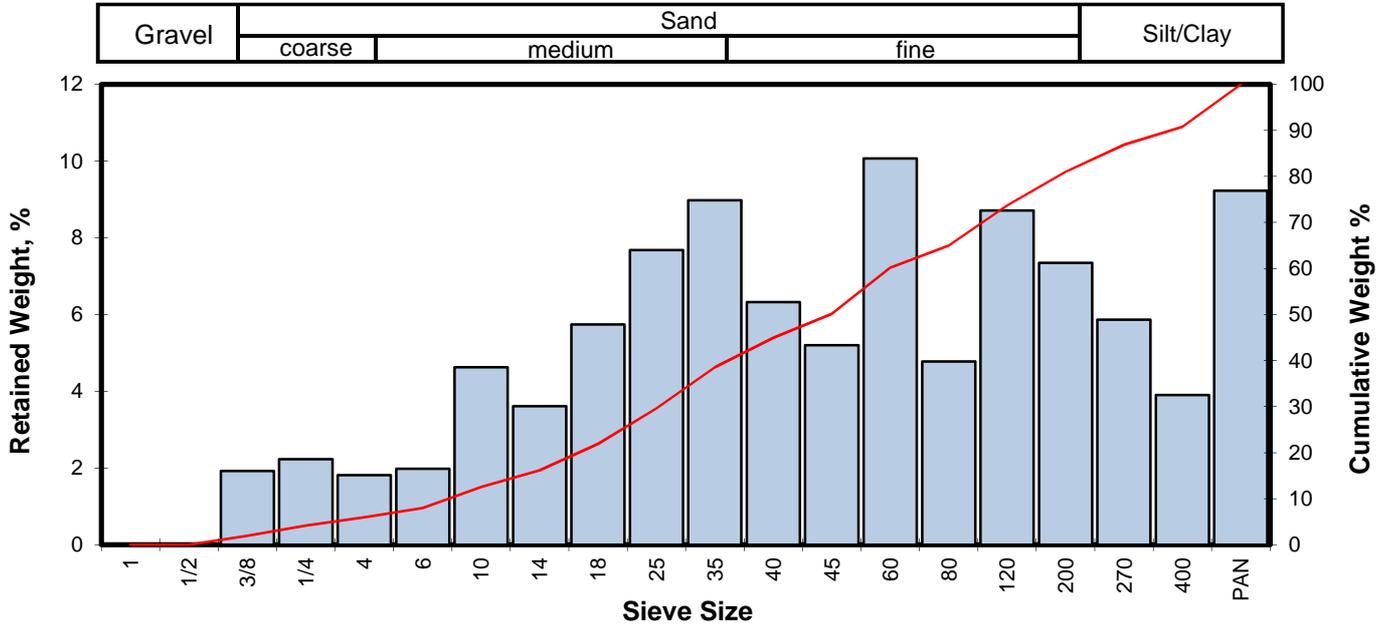
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5			
10	-4.60	0.9570	24.308
16	-4.34	0.7997	20.312
25	-3.96	0.6108	15.515
40	-3.10	0.3382	8.590
50	-2.41	0.2092	5.313
60	-1.65	0.1231	3.128
75	0.15	0.0355	0.902
84	1.70	0.0121	0.308
90	2.87	0.0054	0.137
95	4.20	0.0021	0.054

Measure	Trask	Inman	Folk-Ward
Median, phi	-2.41	-2.41	-2.41
Median, in.	0.2092	0.2092	0.2092
Median, mm	5.313	5.313	5.313
Mean, phi	-3.04	-1.32	-1.68
Mean, in.	0.3232	0.0984	0.1266
Mean, mm	8.208	2.500	3.214
Sorting	4.147	3.022	
Skewness	0.704	0.360	
Kurtosis	0.302		
Grain Size Description (ASTM-USCS Scale)	Gravel (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	52.28
Coarse Sand	10	14.61
Medium Sand	40	13.58
Fine Sand	200	12.95
Silt/Clay	<200	6.59
Total		100

Client: PES Environmental, Inc.
 Project: American Linen
 Project No: 1413.001.02.602

PTS File No: 47413
 Sample ID: MW-135-60-60.5
 Depth, ft: 60.25



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	3.66	1.92	1.92
0.2500	6.351	-2.67	1/4	4.25	2.23	4.15
0.1873	4.757	-2.25	4	3.46	1.82	5.97
0.1324	3.364	-1.75	6	3.78	1.98	7.95
0.0787	2.000	-1.00	10	8.81	4.62	12.57
0.0557	1.414	-0.50	14	6.88	3.61	16.18
0.0394	1.000	0.00	18	10.95	5.74	21.92
0.0278	0.707	0.50	25	14.64	7.68	29.60
0.0197	0.500	1.00	35	17.11	8.98	38.58
0.0166	0.420	1.25	40	12.05	6.32	44.90
0.0139	0.354	1.50	45	9.91	5.20	50.10
0.0098	0.250	2.00	60	19.19	10.07	60.17
0.0070	0.177	2.50	80	9.11	4.78	64.95
0.0049	0.125	3.00	120	16.61	8.71	73.66
0.0029	0.074	3.75	200	14.00	7.34	81.01
0.0021	0.053	4.25	270	11.18	5.87	86.87
0.0015	0.037	4.75	400	7.44	3.90	90.78
			PAN	17.58	9.22	100.00
TOTALS				190.61	100.00	100.00

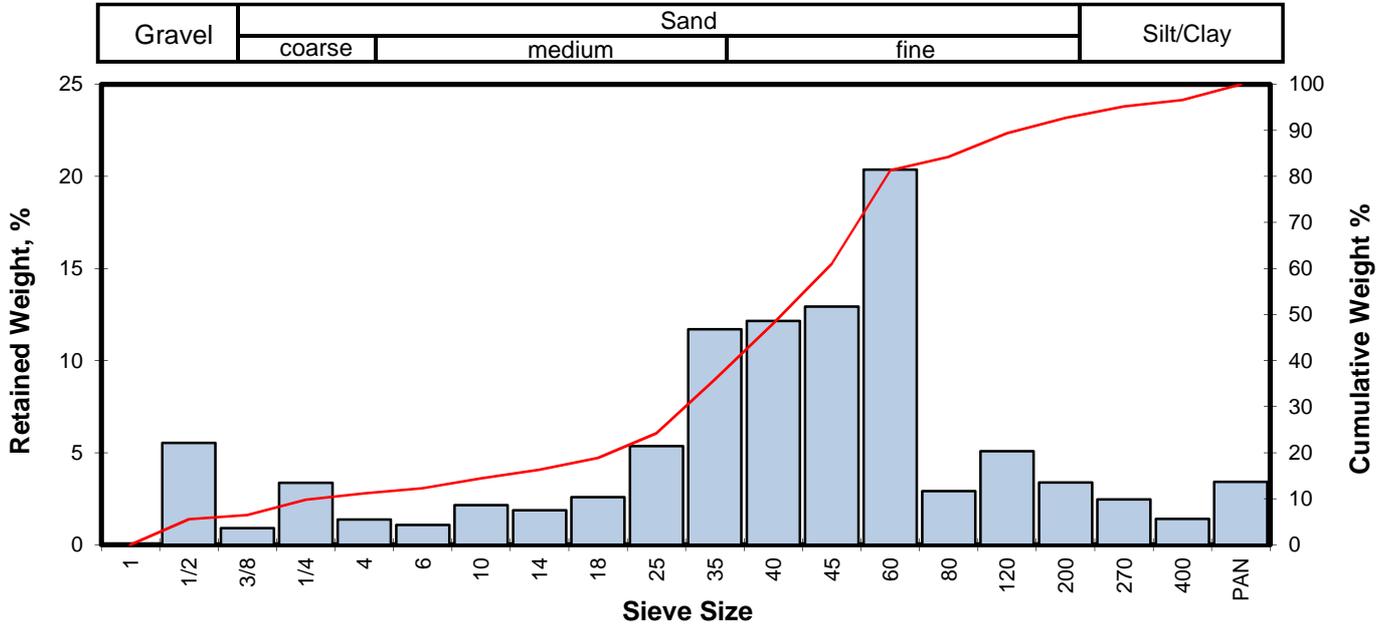
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-2.47	0.2184	5.547
10	-1.42	0.1051	2.670
16	-0.52	0.0566	1.439
25	0.20	0.0343	0.870
40	1.06	0.0189	0.481
50	1.50	0.0140	0.355
60	1.99	0.0099	0.251
75	3.14	0.0045	0.114
84	4.01	0.0025	0.062
90	4.65	0.0016	0.040
95	2.58	0.0066	0.168

Measure	Trask	Inman	Folk-Ward
Median, phi	1.50	1.50	1.50
Median, in.	0.0140	0.0140	0.0140
Median, mm	0.355	0.355	0.355
Mean, phi	1.02	1.74	1.66
Mean, in.	0.0194	0.0118	0.0125
Mean, mm	0.492	0.299	0.317
Sorting	2.767	2.265	1.897
Skewness	0.887	0.108	-0.232
Kurtosis	0.144	0.114	0.704
Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	5.97
Coarse Sand	10	6.61
Medium Sand	40	32.33
Fine Sand	200	36.11
Silt/Clay	<200	18.99
Total		100

Client: PES Environmental, Inc.
 Project: American Linen
 Project No: 1413.001.02.602

PTS File No: 47413
 Sample ID: MW-137-115
 Depth, ft: 115.00



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	11.14	5.54	5.54
0.3740	9.500	-3.25	3/8	1.81	0.90	6.43
0.2500	6.351	-2.67	1/4	6.78	3.37	9.80
0.1873	4.757	-2.25	4	2.76	1.37	11.17
0.1324	3.364	-1.75	6	2.16	1.07	12.25
0.0787	2.000	-1.00	10	4.32	2.15	14.39
0.0557	1.414	-0.50	14	3.76	1.87	16.26
0.0394	1.000	0.00	18	5.19	2.58	18.84
0.0278	0.707	0.50	25	10.78	5.36	24.20
0.0197	0.500	1.00	35	23.53	11.69	35.89
0.0166	0.420	1.25	40	24.47	12.16	48.05
0.0139	0.354	1.50	45	26.03	12.93	60.98
0.0098	0.250	2.00	60	40.99	20.37	81.35
0.0070	0.177	2.50	80	5.85	2.91	84.25
0.0049	0.125	3.00	120	10.24	5.09	89.34
0.0029	0.074	3.75	200	6.81	3.38	92.73
0.0021	0.053	4.25	270	4.94	2.45	95.18
0.0015	0.037	4.75	400	2.82	1.40	96.58
			PAN	6.88	3.42	100.00
TOTALS				201.26	100.00	100.00

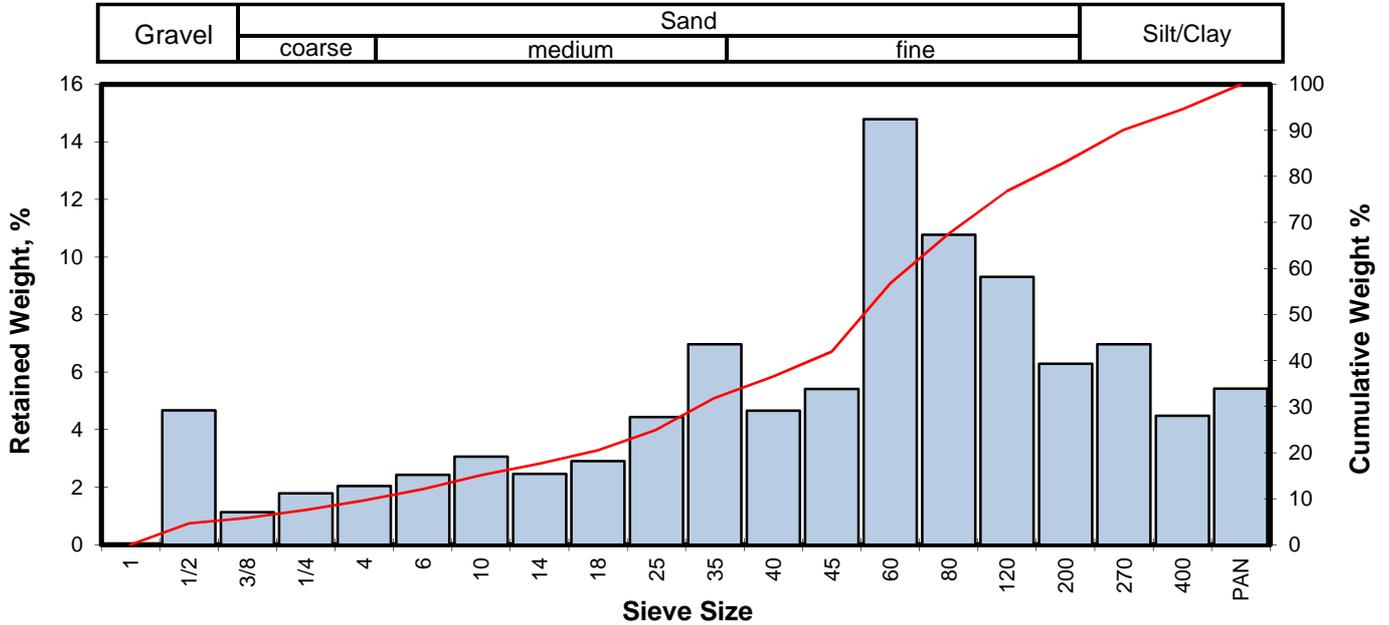
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-3.74	0.5263	13.368
10	-2.61	0.2399	6.093
16	-0.57	0.0585	1.485
25	0.53	0.0272	0.690
40	1.08	0.0186	0.472
50	1.29	0.0161	0.410
60	1.48	0.0141	0.358
75	1.84	0.0110	0.279
84	2.46	0.0072	0.182
90	3.15	0.0044	0.113
95	4.21	0.0021	0.054

Measure	Trask	Inman	Folk-Ward
Median, phi	1.29	1.29	1.29
Median, in.	0.0161	0.0161	0.0161
Median, mm	0.410	0.410	0.410
Mean, phi	1.05	0.94	1.06
Mean, in.	0.0191	0.0205	0.0189
Mean, mm	0.485	0.520	0.480
Sorting	1.575	1.513	1.962
Skewness	1.071	-0.228	-0.246
Kurtosis	0.034	1.628	2.489
Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	11.17
Coarse Sand	10	3.22
Medium Sand	40	33.65
Fine Sand	200	44.68
Silt/Clay	<200	7.27
Total		100

Client: PES Environmental, Inc.
 Project: American Linen
 Project No: 1413.001.02.602

PTS File No: 47413
 Sample ID: MW-138-65
 Depth, ft: 65.00



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	14.27	4.67	4.67
0.3740	9.500	-3.25	3/8	3.47	1.13	5.80
0.2500	6.351	-2.67	1/4	5.45	1.78	7.58
0.1873	4.757	-2.25	4	6.23	2.04	9.62
0.1324	3.364	-1.75	6	7.44	2.43	12.05
0.0787	2.000	-1.00	10	9.38	3.07	15.12
0.0557	1.414	-0.50	14	7.54	2.47	17.59
0.0394	1.000	0.00	18	8.90	2.91	20.50
0.0278	0.707	0.50	25	13.57	4.44	24.93
0.0197	0.500	1.00	35	21.30	6.96	31.90
0.0166	0.420	1.25	40	14.26	4.66	36.56
0.0139	0.354	1.50	45	16.56	5.41	41.98
0.0098	0.250	2.00	60	45.23	14.79	56.77
0.0070	0.177	2.50	80	32.93	10.77	67.53
0.0049	0.125	3.00	120	28.46	9.31	76.84
0.0029	0.074	3.75	200	19.25	6.29	83.13
0.0021	0.053	4.25	270	21.29	6.96	90.10
0.0015	0.037	4.75	400	13.69	4.48	94.57
			PAN	16.60	5.43	100.00
TOTALS				305.82	100.00	100.00

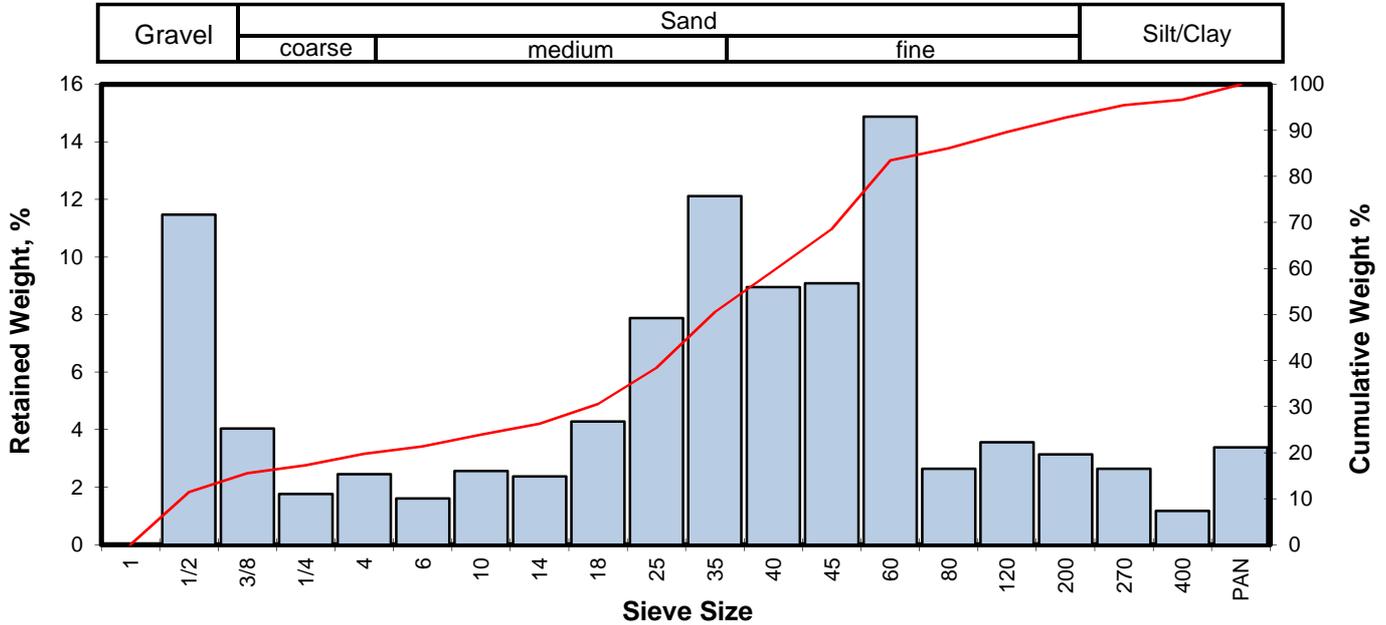
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-3.53	0.4540	11.531
10	-2.17	0.1774	4.506
16	-0.82	0.0696	1.767
25	0.50	0.0277	0.705
40	1.41	0.0148	0.377
50	1.77	0.0115	0.293
60	2.15	0.0089	0.225
75	2.90	0.0053	0.134
84	3.81	0.0028	0.071
90	4.24	0.0021	0.053
95	4.38	0.0019	0.048

Measure	Trask	Inman	Folk-Ward
Median, phi	1.77	1.77	1.77
Median, in.	0.0115	0.0115	0.0115
Median, mm	0.293	0.293	0.293
Mean, phi	1.25	1.50	1.59
Mean, in.	0.0165	0.0140	0.0131
Mean, mm	0.419	0.355	0.333
Sorting	2.295	2.317	2.356
Skewness	1.048	-0.119	-0.230
Kurtosis	0.064	0.706	1.352
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	9.62
Coarse Sand	10	5.50
Medium Sand	40	21.44
Fine Sand	200	46.57
Silt/Clay	<200	16.87
Total		100

Client: PES Environmental, Inc.
 Project: American Linen
 Project No: 1413.001.02.602

PTS File No: 47413
 Sample ID: MW-138-115
 Depth, ft: 115.00



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	27.11	11.47	11.47
0.3740	9.500	-3.25	3/8	9.54	4.04	15.51
0.2500	6.351	-2.67	1/4	4.18	1.77	17.28
0.1873	4.757	-2.25	4	5.79	2.45	19.73
0.1324	3.364	-1.75	6	3.80	1.61	21.34
0.0787	2.000	-1.00	10	6.05	2.56	23.90
0.0557	1.414	-0.50	14	5.62	2.38	26.27
0.0394	1.000	0.00	18	10.13	4.29	30.56
0.0278	0.707	0.50	25	18.60	7.87	38.43
0.0197	0.500	1.00	35	28.63	12.12	50.55
0.0166	0.420	1.25	40	21.16	8.95	59.50
0.0139	0.354	1.50	45	21.48	9.09	68.59
0.0098	0.250	2.00	60	35.14	14.87	83.46
0.0070	0.177	2.50	80	6.23	2.64	86.10
0.0049	0.125	3.00	120	8.41	3.56	89.66
0.0029	0.074	3.75	200	7.41	3.14	92.79
0.0021	0.053	4.25	270	6.24	2.64	95.43
0.0015	0.037	4.75	400	2.79	1.18	96.61
			PAN	8.00	3.39	100.00
TOTALS				236.31	100.00	100.00

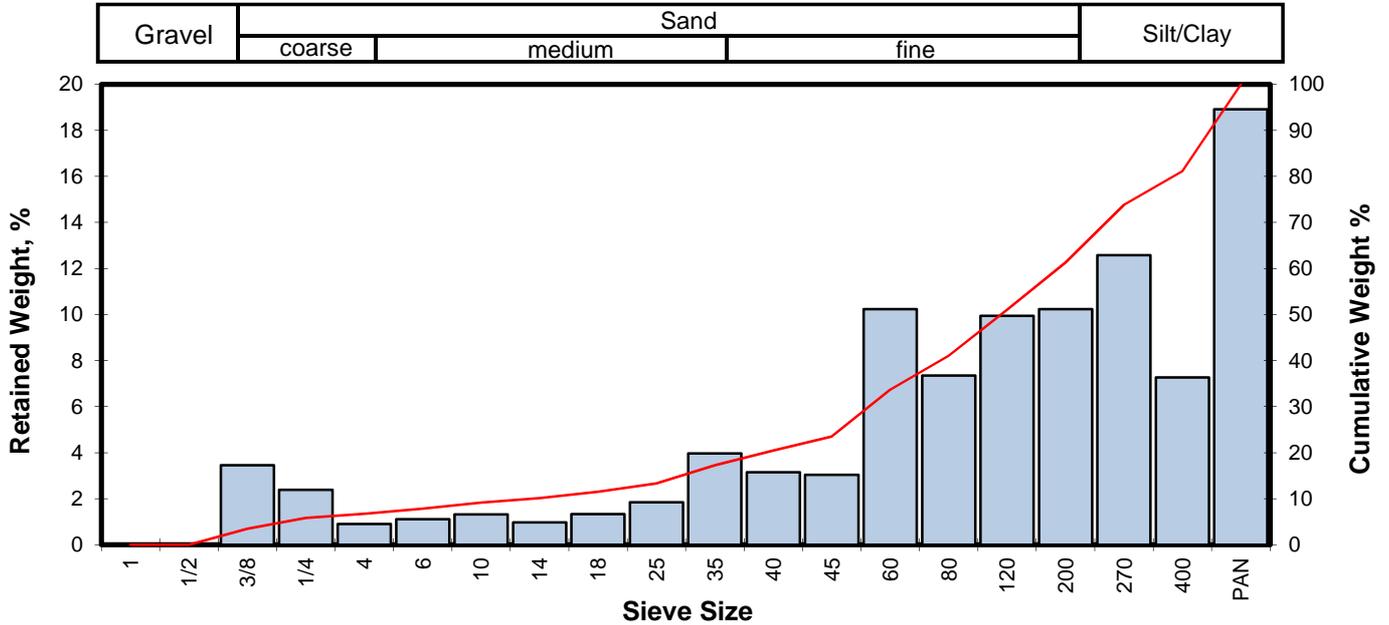
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-4.21	0.7277	18.483
10	-3.77	0.5380	13.664
16	-3.09	0.3345	8.496
25	-0.77	0.0670	1.703
40	0.56	0.0266	0.676
50	0.98	0.0200	0.508
60	1.26	0.0164	0.416
75	1.72	0.0120	0.305
84	2.10	0.0092	0.233
90	3.08	0.0046	0.118
95	4.17	0.0022	0.056

Measure	Trask	Inman	Folk-Ward
Median, phi	0.98	0.98	0.98
Median, in.	0.0200	0.0200	0.0200
Median, mm	0.508	0.508	0.508
Mean, phi	-0.01	-0.49	0.00
Mean, in.	0.0395	0.0554	0.0394
Mean, mm	1.004	1.407	1.002
Sorting	2.365	2.594	2.566
Skewness	1.418	-0.567	-0.402
Kurtosis	0.052	0.614	1.382
Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	19.73
Coarse Sand	10	4.17
Medium Sand	40	35.61
Fine Sand	200	33.29
Silt/Clay	<200	7.21
Total		100

Client: PES Environmental, Inc.
 Project: American Linen
 Project No: 1413.001.02.602

PTS File No: 47413
 Sample ID: MW-140-80-80.5
 Depth, ft: 80.25



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	3.99	3.45	3.45
0.2500	6.351	-2.67	1/4	2.75	2.38	5.83
0.1873	4.757	-2.25	4	1.05	0.91	6.74
0.1324	3.364	-1.75	6	1.29	1.12	7.86
0.0787	2.000	-1.00	10	1.53	1.32	9.18
0.0557	1.414	-0.50	14	1.12	0.97	10.15
0.0394	1.000	0.00	18	1.54	1.33	11.48
0.0278	0.707	0.50	25	2.13	1.84	13.33
0.0197	0.500	1.00	35	4.59	3.97	17.30
0.0166	0.420	1.25	40	3.64	3.15	20.45
0.0139	0.354	1.50	45	3.51	3.04	23.49
0.0098	0.250	2.00	60	11.82	10.23	33.72
0.0070	0.177	2.50	80	8.50	7.36	41.07
0.0049	0.125	3.00	120	11.49	9.94	51.02
0.0029	0.074	3.75	200	11.83	10.24	61.25
0.0021	0.053	4.25	270	14.53	12.57	73.83
0.0015	0.037	4.75	400	8.39	7.26	81.09
			PAN	21.85	18.91	100.00
TOTALS				115.55	100.00	100.00

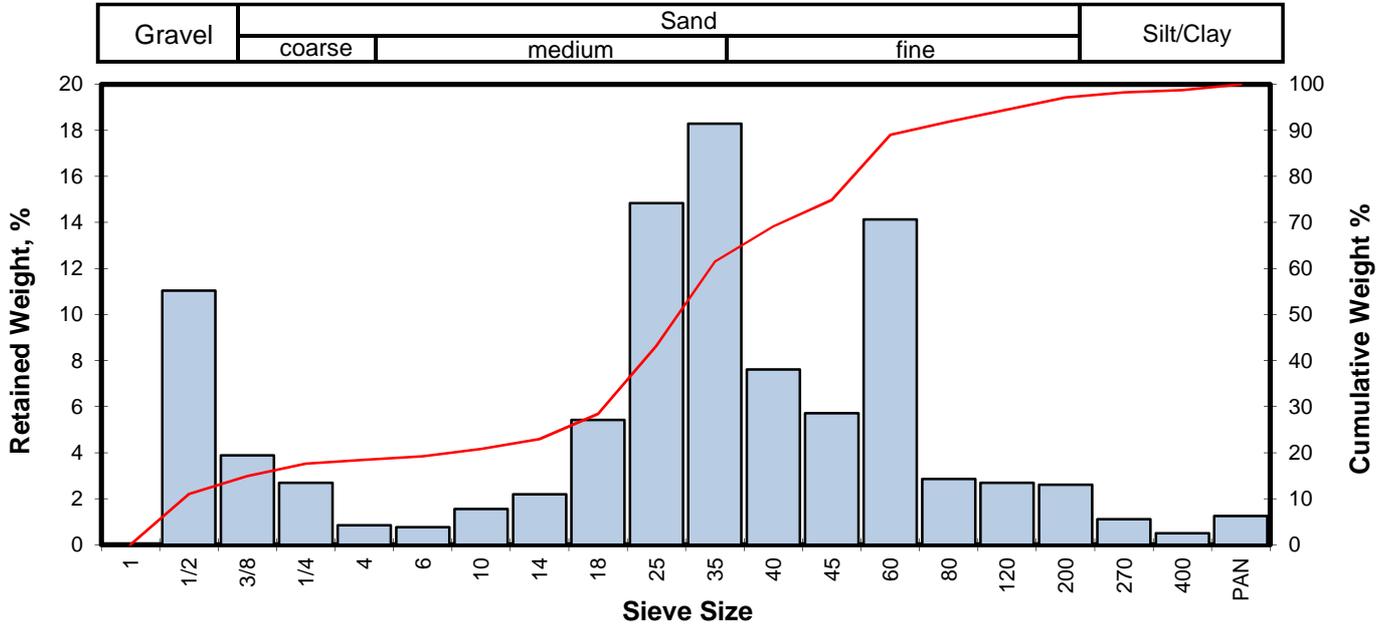
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-2.87	0.2879	7.312
10	-0.58	0.0588	1.493
16	0.84	0.0220	0.560
25	1.57	0.0132	0.336
40	2.43	0.0073	0.186
50	2.95	0.0051	0.130
60	3.66	0.0031	0.079
75	4.33	0.0020	0.050
84	4.02	0.0024	0.062
90	2.51	0.0069	0.175
95	1.26	0.0165	0.419

Measure	Trask	Inman	Folk-Ward
Median, phi	2.95	2.95	2.95
Median, in.	0.0051	0.0051	0.0051
Median, mm	0.130	0.130	0.130
Mean, phi	2.37	2.43	2.60
Mean, in.	0.0076	0.0073	0.0065
Mean, mm	0.193	0.186	0.165
Sorting	2.600	1.591	1.421
Skewness	0.998	-0.327	-1.074
Kurtosis	0.109	0.296	0.613
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	6.74
Coarse Sand	10	2.44
Medium Sand	40	11.27
Fine Sand	200	40.80
Silt/Clay	<200	38.75
Total		100

Client: PES Environmental, Inc.
 Project: American Linen
 Project No: 1413.001.02.602

PTS File No: 47413
 Sample ID: MW-140-90
 Depth, ft: 90.00



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	30.72	11.04	11.04
0.3740	9.500	-3.25	3/8	10.80	3.88	14.92
0.2500	6.351	-2.67	1/4	7.48	2.69	17.61
0.1873	4.757	-2.25	4	2.37	0.85	18.46
0.1324	3.364	-1.75	6	2.13	0.77	19.23
0.0787	2.000	-1.00	10	4.33	1.56	20.78
0.0557	1.414	-0.50	14	6.10	2.19	22.98
0.0394	1.000	0.00	18	15.08	5.42	28.40
0.0278	0.707	0.50	25	41.27	14.83	43.23
0.0197	0.500	1.00	35	50.88	18.29	61.52
0.0166	0.420	1.25	40	21.20	7.62	69.13
0.0139	0.354	1.50	45	15.91	5.72	74.85
0.0098	0.250	2.00	60	39.32	14.13	88.98
0.0070	0.177	2.50	80	7.95	2.86	91.84
0.0049	0.125	3.00	120	7.47	2.68	94.53
0.0029	0.074	3.75	200	7.25	2.61	97.13
0.0021	0.053	4.25	270	3.08	1.11	98.24
0.0015	0.037	4.75	400	1.41	0.51	98.75
			PAN	3.49	1.25	100.00
TOTALS				278.24	100.00	100.00

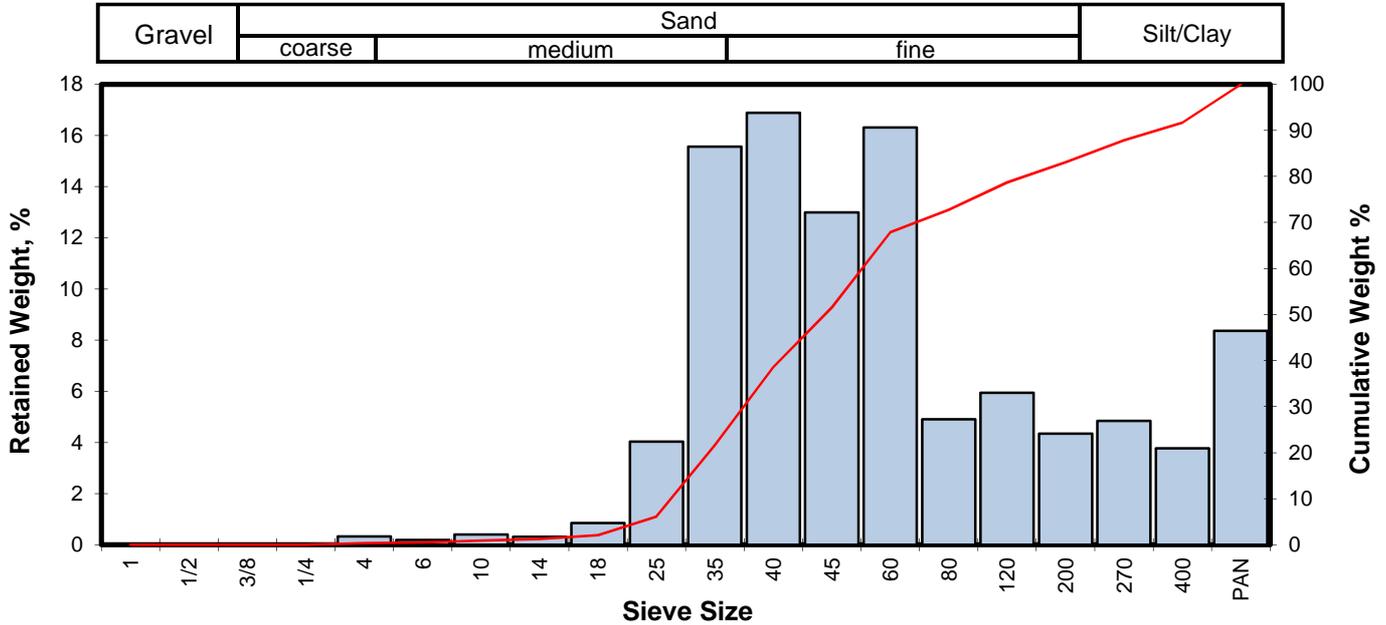
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-4.19	0.7192	18.267
10	-3.74	0.5254	13.345
16	-3.02	0.3183	8.084
25	-0.31	0.0489	1.243
40	0.39	0.0300	0.763
50	0.69	0.0245	0.622
60	0.96	0.0203	0.515
75	1.51	0.0139	0.352
84	1.82	0.0111	0.283
90	2.18	0.0087	0.221
95	3.14	0.0045	0.114

Measure	Trask	Inman	Folk-Ward
Median, phi	0.69	0.69	0.69
Median, in.	0.0245	0.0245	0.0245
Median, mm	0.622	0.622	0.622
Mean, phi	0.33	-0.60	-0.17
Mean, in.	0.0314	0.0595	0.0443
Mean, mm	0.797	1.511	1.124
Sorting	1.878	2.419	2.320
Skewness	1.064	-0.529	-0.430
Kurtosis	0.034	0.514	1.651
Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	18.46
Coarse Sand	10	2.32
Medium Sand	40	48.35
Fine Sand	200	28.00
Silt/Clay	<200	2.87
Total		100

Client: PES Environmental, Inc.
 Project: American Linen
 Project No: 1413.001.02.602

PTS File No: 47413
 Sample ID: MW-139-80
 Depth, ft: 80.00



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.78	0.32	0.32
0.1324	3.364	-1.75	6	0.45	0.19	0.51
0.0787	2.000	-1.00	10	0.98	0.40	0.91
0.0557	1.414	-0.50	14	0.75	0.31	1.22
0.0394	1.000	0.00	18	2.07	0.85	2.07
0.0278	0.707	0.50	25	9.77	4.03	6.10
0.0197	0.500	1.00	35	37.73	15.56	21.66
0.0166	0.420	1.25	40	40.96	16.89	38.55
0.0139	0.354	1.50	45	31.51	12.99	51.54
0.0098	0.250	2.00	60	39.55	16.31	67.85
0.0070	0.177	2.50	80	11.91	4.91	72.76
0.0049	0.125	3.00	120	14.40	5.94	78.70
0.0029	0.074	3.75	200	10.52	4.34	83.03
0.0021	0.053	4.25	270	11.73	4.84	87.87
0.0015	0.037	4.75	400	9.14	3.77	91.64
			PAN	20.28	8.36	100.00
TOTALS				242.53	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	0.36	0.0306	0.777
10	0.63	0.0255	0.648
16	0.82	0.0223	0.567
25	1.05	0.0190	0.483
40	1.28	0.0162	0.412
50	1.47	0.0142	0.361
60	1.76	0.0116	0.295
75	2.69	0.0061	0.155
84	3.85	0.0027	0.069
90	4.53	0.0017	0.043
95	2.84	0.0055	0.140

Measure	Trask	Inman	Folk-Ward
Median, phi	1.47	1.47	1.47
Median, in.	0.0142	0.0142	0.0142
Median, mm	0.361	0.361	0.361
Mean, phi	1.65	2.33	2.05
Mean, in.	0.0126	0.0078	0.0095
Mean, mm	0.319	0.198	0.242
Sorting	1.765	1.516	1.133
Skewness	0.759	0.570	0.338
Kurtosis	0.271	-0.183	0.619
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.32
Coarse Sand	10	0.59
Medium Sand	40	37.64
Fine Sand	200	44.49
Silt/Clay	<200	16.97
Total		100

PARTICLE SIZE SUMMARY
(METHODOLOGY: ASTM D422/D4464M)

PROJECT NAME: American Linen
PROJECT NO: 141300102602

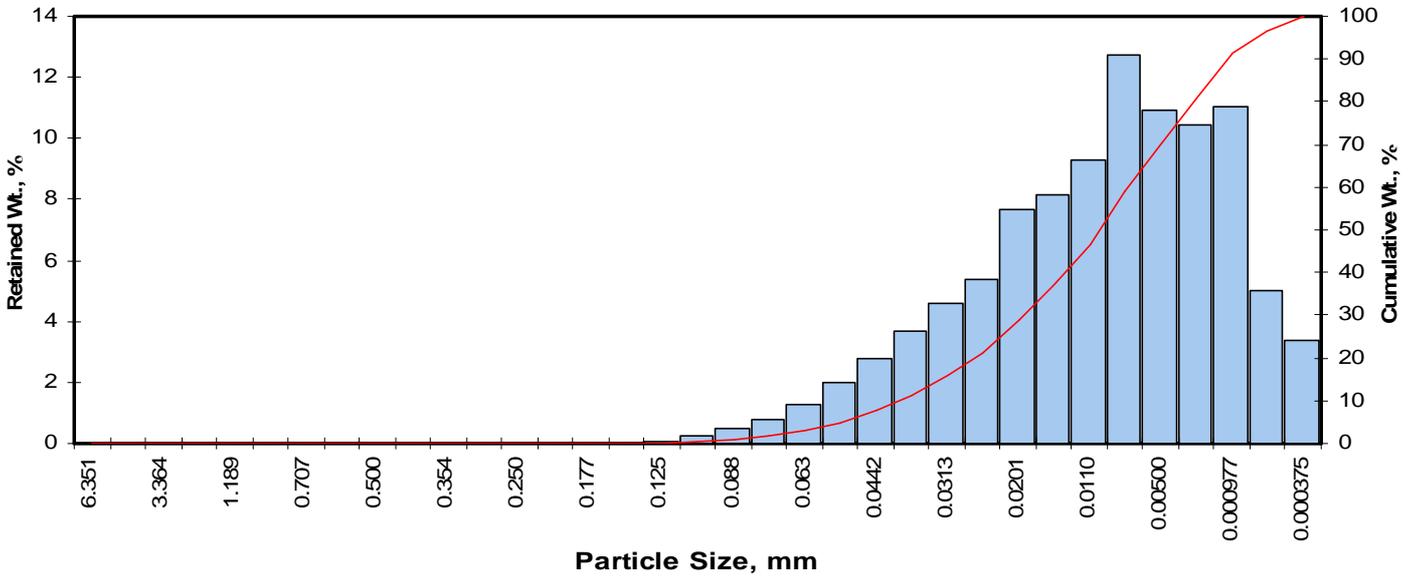
Sample ID	Depth, ft.	Mean Grain Size Description (1)	Median Grain Size mm	Particle Size Distribution, wt. percent						Silt & Clay
				Gravel	Sand Size			Silt	Clay	
					Coarse	Medium	Fine			
B-212-54	54.00	Silt	0.010	0.00	0.00	0.00	1.64	68.48	29.89	98.36
MW-136-77	77.00	Clay	0.002	0.00	0.00	0.00	0.87	28.53	70.60	99.13
MW-137-50	50.00	Silt	0.005	0.00	0.00	0.00	0.06	51.17	48.76	99.94

(1) Based on Mean from Trask

Client: PES Environmental Inc
 Project: American Linen
 Project No: 141300102602

PTS File No: 47413
 Sample ID: B-212-54
 Depth, ft: 54.00

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Particle Size, mm

Opening		Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.00	0.00	0.00
0.0331	0.841	0.25	20	0.00	0.00	0.00
0.0278	0.707	0.50	25	0.00	0.00	0.00
0.0234	0.595	0.75	30	0.00	0.00	0.00
0.0197	0.500	1.00	35	0.00	0.00	0.00
0.0166	0.420	1.25	40	0.00	0.00	0.00
0.0139	0.354	1.50	45	0.00	0.00	0.00
0.0117	0.297	1.75	50	0.00	0.00	0.00
0.0098	0.250	2.00	60	0.00	0.00	0.00
0.0083	0.210	2.25	70	0.00	0.00	0.00
0.0070	0.177	2.50	80	0.00	0.00	0.00
0.0059	0.149	2.75	100	0.00	0.00	0.00
0.0049	0.125	3.00	120	0.07	0.07	0.07
0.0041	0.105	3.25	140	0.25	0.25	0.32
0.0035	0.088	3.50	170	0.50	0.50	0.82
0.0029	0.074	3.75	200	0.81	0.81	1.64
0.0025	0.063	4.00	230	1.28	1.28	2.92
0.0021	0.053	4.25	270	1.96	1.97	4.89
0.00174	0.0442	4.50	325	2.75	2.76	7.65
0.00146	0.0372	4.75	400	3.66	3.67	11.32
0.00123	0.0313	5.00	450	4.56	4.58	15.90
0.000986	0.0250	5.32	500	5.37	5.39	21.29
0.000790	0.0201	5.64	635	7.63	7.66	28.94
0.000615	0.0156	6.00		8.14	8.17	37.11
0.000435	0.0110	6.50		9.28	9.31	46.43
0.000308	0.00781	7.00		12.70	12.75	59.17
0.000197	0.00500	7.65		10.90	10.94	70.11
0.000077	0.00195	9.00		10.40	10.44	80.55
0.000038	0.000977	10.00		11.00	11.04	91.59
0.000019	0.000488	11.00		5.00	5.02	96.61
0.000015	0.000375	11.38		3.38	3.39	100.00
TOTALS				99.60	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	4.26	0.0021	0.052
10	4.66	0.0016	0.040
16	5.01	0.0012	0.031
25	5.48	0.0009	0.022
40	6.15	0.0006	0.014
50	6.64	0.0004	0.010
60	7.05	0.0003	0.008
75	8.28	0.0001	0.003
84	9.31	0.0001	0.002
90	9.86	0.0000	0.001
95	10.68	0.0000	0.001

Measure	Trask	Inman	Folk-Ward
Median, phi	6.64	6.64	6.64
Median, in.	0.0004	0.0004	0.0004
Median, mm	0.010	0.010	0.010
Mean, phi	6.28	7.16	6.99
Mean, in.	0.0005	0.0003	0.0003
Mean, mm	0.013	0.007	0.008
Sorting	2.643	2.153	2.049
Skewness	0.848	0.241	0.250
Kurtosis	0.250	0.491	0.938

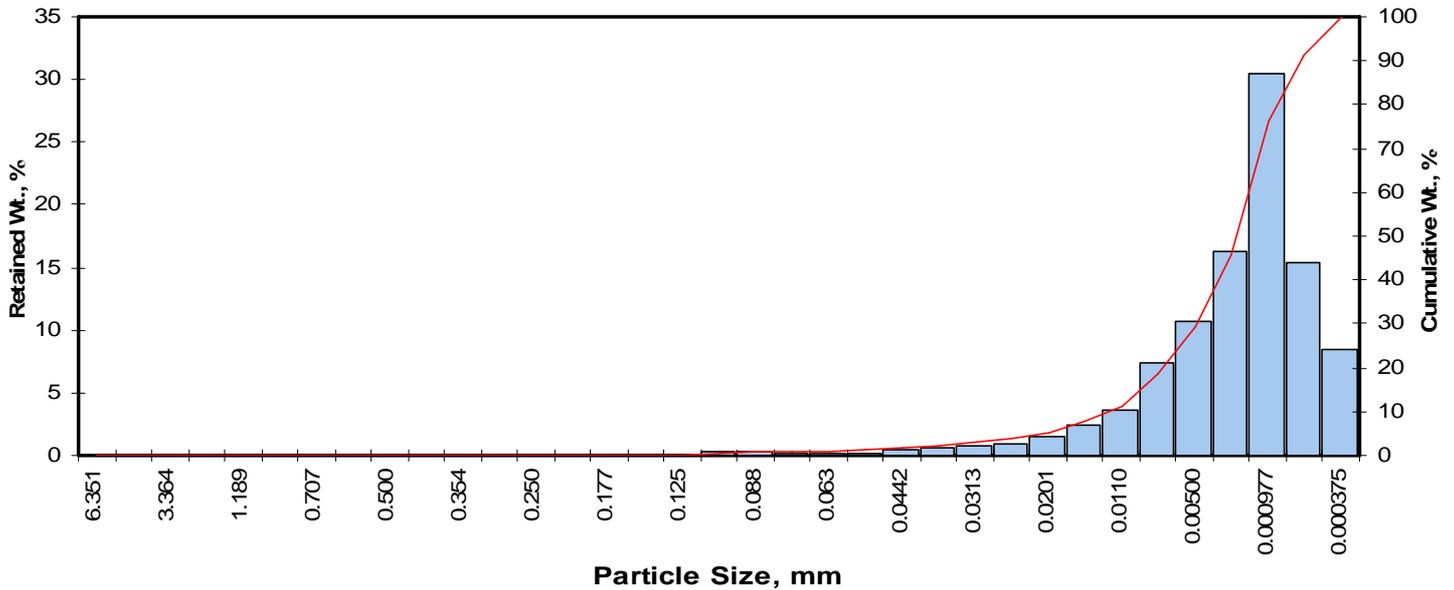
Grain Size Description (ASTM-USCS Scale)	Silt (based on Mean from Trask)
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Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	0.00
Fine Sand	200	1.64
Silt	>0.005 mm	68.48
Clay	<0.005 mm	29.89
Total		100

Client: PES Environmental Inc
Project: American Linen
Project No: 141300102602

PTS File No: 47413
Sample ID: MW-136-77
Depth, ft: 77.00

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening		Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.00	0.00	0.00
0.0331	0.841	0.25	20	0.00	0.00	0.00
0.0278	0.707	0.50	25	0.00	0.00	0.00
0.0234	0.595	0.75	30	0.00	0.00	0.00
0.0197	0.500	1.00	35	0.00	0.00	0.00
0.0166	0.420	1.25	40	0.00	0.00	0.00
0.0139	0.354	1.50	45	0.00	0.00	0.00
0.0117	0.297	1.75	50	0.00	0.00	0.00
0.0098	0.250	2.00	60	0.00	0.00	0.00
0.0083	0.210	2.25	70	0.00	0.00	0.00
0.0070	0.177	2.50	80	0.00	0.00	0.00
0.0059	0.149	2.75	100	0.00	0.00	0.00
0.0049	0.125	3.00	120	0.07	0.07	0.08
0.0041	0.105	3.25	140	0.26	0.26	0.34
0.0035	0.088	3.50	170	0.32	0.32	0.66
0.0029	0.074	3.75	200	0.21	0.21	0.87
0.0025	0.063	4.00	230	0.14	0.14	1.01
0.0021	0.053	4.25	270	0.21	0.21	1.22
0.00174	0.0442	4.50	325	0.42	0.42	1.65
0.00146	0.0372	4.75	400	0.60	0.60	2.25
0.00123	0.0313	5.00	450	0.68	0.69	2.94
0.000986	0.0250	5.32	500	0.83	0.84	3.78
0.000790	0.0201	5.64	635	1.56	1.57	5.35
0.000615	0.0156	6.00		2.42	2.44	7.79
0.000435	0.0110	6.50		3.55	3.58	11.37
0.000308	0.00781	7.00		7.29	7.35	18.72
0.000197	0.00500	7.65		10.60	10.69	29.40
0.000077	0.00195	9.00		16.10	16.23	45.63
0.000038	0.000977	10.00		30.30	30.55	76.18
0.000019	0.000488	11.00		15.20	15.32	91.50
0.000015	0.000375	11.38		8.43	8.50	100.00
TOTALS				99.20	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	5.57	0.0008	0.021
10	6.31	0.0005	0.013
16	6.82	0.0003	0.009
25	7.38	0.0002	0.006
40	8.53	0.0001	0.003
50	9.14	0.0001	0.002
60	9.47	0.0001	0.001
75	9.96	0.0000	0.001
84	10.51	0.0000	0.001
90	10.90	0.0000	0.001
95	11.16	0.0000	0.000

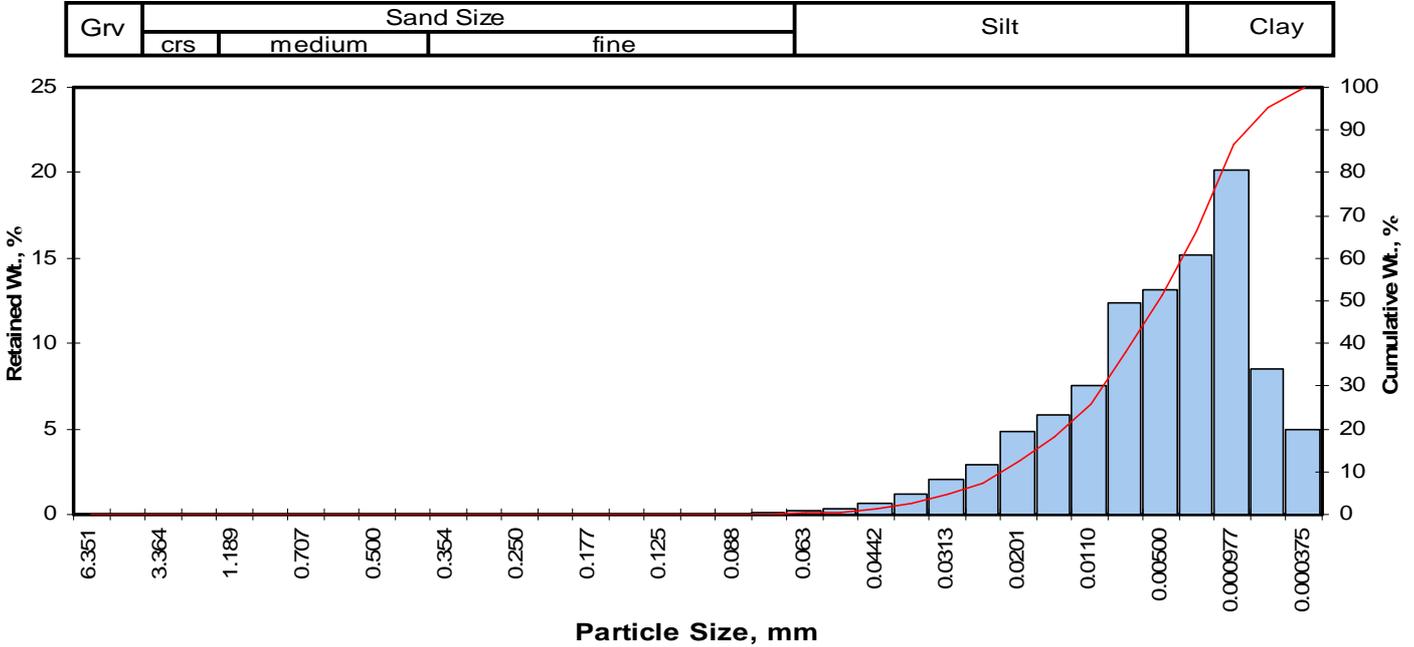
Measure	Trask	Inman	Folk-Ward
Median, phi	9.14	9.14	9.14
Median, in.	0.0001	0.0001	0.0001
Median, mm	0.002	0.002	0.002
Mean, phi	8.16	8.66	8.82
Mean, in.	0.0001	0.0001	0.0001
Mean, mm	0.004	0.002	0.002
Sorting	2.447	1.848	1.770
Skewness	1.388	-0.260	-0.270
Kurtosis	0.207	0.512	0.887

Grain Size Description (ASTM-USCS Scale)	Clay (based on Mean from Trask)
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Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	0.00
Fine Sand	200	0.87
Silt	>0.005 mm	28.53
Clay	<0.005 mm	70.60
Total		100

Client: PES Environmental Inc
 Project: American Linen
 Project No: 141300102602

PTS File No: 47413
 Sample ID: MW-137-50
 Depth, ft: 50.00



Particle Size, mm

Opening		Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.00	0.00	0.00
0.0331	0.841	0.25	20	0.00	0.00	0.00
0.0278	0.707	0.50	25	0.00	0.00	0.00
0.0234	0.595	0.75	30	0.00	0.00	0.00
0.0197	0.500	1.00	35	0.00	0.00	0.00
0.0166	0.420	1.25	40	0.00	0.00	0.00
0.0139	0.354	1.50	45	0.00	0.00	0.00
0.0117	0.297	1.75	50	0.00	0.00	0.00
0.0098	0.250	2.00	60	0.00	0.00	0.00
0.0083	0.210	2.25	70	0.00	0.00	0.00
0.0070	0.177	2.50	80	0.00	0.00	0.00
0.0059	0.149	2.75	100	0.00	0.00	0.00
0.0049	0.125	3.00	120	0.00	0.00	0.00
0.0041	0.105	3.25	140	0.00	0.00	0.00
0.0035	0.088	3.50	170	0.01	0.01	0.01
0.0029	0.074	3.75	200	0.06	0.06	0.06
0.0025	0.063	4.00	230	0.18	0.18	0.24
0.0021	0.053	4.25	270	0.37	0.37	0.61
0.00174	0.0442	4.50	325	0.66	0.66	1.28
0.00146	0.0372	4.75	400	1.23	1.24	2.51
0.00123	0.0313	5.00	450	2.05	2.06	4.57
0.000986	0.0250	5.32	500	2.94	2.95	7.52
0.000790	0.0201	5.64	635	4.83	4.85	12.37
0.000615	0.0156	6.00		5.82	5.85	18.22
0.000435	0.0110	6.50		7.47	7.50	25.72
0.000308	0.00781	7.00		12.30	12.35	38.08
0.000197	0.00500	7.65		13.10	13.16	51.24
0.000077	0.00195	9.00		15.10	15.17	66.40
0.000038	0.000977	10.00		20.10	20.19	86.59
0.000019	0.000488	11.00		8.46	8.50	95.09
0.000015	0.000375	11.38		4.89	4.91	100.00
TOTALS				99.60	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	5.05	0.0012	0.030
10	5.48	0.0009	0.022
16	5.86	0.0007	0.017
25	6.45	0.0004	0.011
40	7.09	0.0003	0.007
50	7.58	0.0002	0.005
60	8.43	0.0001	0.003
75	9.43	0.0001	0.001
84	9.87	0.0000	0.001
90	10.40	0.0000	0.001
95	10.99	0.0000	0.000

Measure	Trask	Inman	Folk-Ward
Median, phi	7.58	7.58	7.58
Median, in.	0.0002	0.0002	0.0002
Median, mm	0.005	0.005	0.005
Mean, phi	7.28	7.87	7.77
Mean, in.	0.0003	0.0002	0.0002
Mean, mm	0.006	0.004	0.005
Sorting	2.803	2.004	1.903
Skewness	0.782	0.141	0.144
Kurtosis	0.231	0.483	0.819
Grain Size Description		Silt	
(ASTM-USCS Scale)		(based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	0.00
Fine Sand	200	0.06
Silt	>0.005 mm	51.17
Clay	<0.005 mm	48.76
Total		100

PTS File No: 47413
Client: PES Environmental, Inc.
Report Date:

DRY BULK DENSITY OF IN-PLACE SOIL
(Methodology: ASTM D2937)

Project Name: American Linen
Project No: 1413.001.02.602

SAMPLE ID.	DEPTH, ft.	ANALYSIS DATE	TOTAL SAMPLE VOLUME, cc	MOISTURE CONTENT, % wt	VOLUMETRIC MOISTURE CONTENT, fraction Vb	DRY BULK DENSITY, g/cc
MW-135-60-60.5	60.4	20171026	182.30	10.9	0.221	2.04
MW-140-80-80.6	80.4	20171026	142.91	12.6	0.227	1.80

Vb = Bulk Volume

PTS File No: 47413
 Client: PES Environmental, Inc.
 Report Date: 10/29/17

ORGANIC CARBON DATA - TOC (foc)

(Methodology: Walkley-Black)

Project Name: American Linen
 Project No: 1413.001.02.602

SAMPLE ID.	DEPTH, ft.	ANALYSIS DATE	ANALYSIS TIME	SAMPLE MATRIX	TOTAL ORGANIC CARBON, mg/kg	FRACTION ORGANIC CARBON, g/g
B-205-79	79	20171027	1100	SOIL	1450	1.45E-03
B-207-52	52	20171027	1100	SOIL	1500	1.50E-03
B-209-73	73	20171027	1100	SOIL	1900	1.90E-03
B-213-125	125	20171027	1100	SOIL	390	3.90E-04
MW-132-82	82	20171027	1100	SOIL	2100	2.10E-03
MW-137-90	90	20171027	1100	SOIL	2450	2.45E-03

Blank	N/A	20171027	1100	BLANK	ND	ND
SRM D094-542	N/A	20171027	1100	SRM	6460	6.46E-03

Reporting Limit: 100 1.00E-04

QC DATA

SRM ID/Lot No.	REC (%)	Control Limits	Certified Concentration mg/kg	QC Performance Acceptance Limits, mg/kg	
				Lower	Upper
SRM D094-542	90	75-125	7150	5363	8938

ND = Not Detected

COMPANY				ANALYSIS REQUEST													PO#									
RES ENVIRONMENTAL, INC.																	TURNAROUND TIME									
ADDRESS: 1215 4th Ave STE 1550 SEATTLE, WA 98161																	24 HOURS <input type="checkbox"/>									
CITY: SEATTLE, WA																	5 DAYS <input type="checkbox"/>									
PROJECT MANAGER: Bill Halderman																	72 HOURS <input type="checkbox"/>									
PROJECT NAME: AMERICAN LEASEN																	NORMAL <input checked="" type="checkbox"/>									
PROJECT NUMBER: 1413.001.02.602																	OTHER: 6-9 DAY <input checked="" type="checkbox"/>									
PHONE NUMBER: 206-524-3980																	SAMPLE INTEGRITY (CHECK):									
FAX NUMBER: 206-524-3985																	INTACT: <input type="checkbox"/>									
SITE LOCATION: SEATTLE, WA																	TEMP(F): 75.8									
SAMPLER SIGNATURE: [Signature]																	PTS QUOTE NO.									
SAMPLE ID	DATE	TIME	DEPTH, FT	NUMBER OF SAMPLES	SOIL PROPERTIES PACKAGE	HYDRAULIC CONDUCTIVITY PACKAGE	PORE FLUID SATURATIONS PACKAGE	TCEQ/TNRCC PROPERTIES PACKAGE	CAPILLARITY PACKAGE	FLUID PROPERTIES PACKAGE	PHOTOLOG: CORE PHOTOGRAPHY	VAPOR TRANSPORT PACKAGE	POROSITY: TOTAL, AIR FILLED, WATER FILLED	POROSITY: EFFECTIVE, ASTM D425M	SPECIFIC GRAVITY, ASTM D854	BULK DENSITY (DRY), API RP40 or ASTM D2937	AIR PERMEABILITY, API RP40	HYDRAULIC CONDUCTIVITY, EPA9100/API RP40 or D5084	GRAIN SIZE DISTRIBUTION, ASTM D422 & D464M	TOC: WALKLEY-BLACK FOC	ATTERBERG LIMITS, ASTM D4318	VAPOR INTRUSION PACKAGE	FREE PRODUCT MOBILITY PACKAGE	PTS FILE:	COMMENTS	
B-213-99	9-6-17		99	1															X						47413	
B-213-125	9-6-17		125	1															X							
B-216-76	9-1-17		76	1															X							
B-217-97	9-6-17	1200	97	1															X							
B-219-73	8-28-17		73	1															X							
MW-132-82	8-23-17		82	1															X							
MW-132-53	8-23-17		53	1															X							
MW-133-106	8-16-17		106	1															X							
MW-135-60-60.5	8-24-17		60-60.5	1															X							RING SAMPLER
MW-136-77	8-28-17		77	1															X							
MW-137-50	8-31-17		50	1															X							
1. RELINQUISHED BY: [Signature]				2. RECEIVED BY: [Signature]													3. RECEIVED BY:									
COMPANY: RES ENVIRONMENTAL INC.				COMPANY: PTS Laboratories, Inc.													COMPANY:									
DATE: 10-2-17				DATE: 10/19/17													DATE:									
TIME: 1500				TIME: 1120													TIME:									

